Licensee Performance Evaluation

1992-1997

LICENSEE PERFORMANCE EVALUATION
(Criteria for the Year 2002 Review)

The *Crown Lands and Forest Act* requires that the Minister of Natural Resources and Energy evaluate the forest management performance of each Crown Timber Licensee at five-year intervals. Performance evaluation results are used in the Minister's decision to extend the length of the Forest Management Agreements. Performance reviews were conducted in 1987, 1992, and 1997. The next review will occur in 2002.

The purpose of this document is to identify the criteria, form and content of the 2002 review. The following addresses the five key elements of the evaluation methodology.

I. WHO IS BEING EVALUATED?

The Licensee Company is being evaluated, not individuals within the company.

II. WHO IS MAKING THE EVALUATION?

The Minister of Natural Resources and Energy makes the formal evaluation using information provided by Departmental staff.

III. WHAT IS THE TIMING OF THE EVALUATION?

Information used in the evaluation will be accumulated over the period April 1, 1997 to March 31, 2002, and the evaluation itself will be performed between April 1 and October 1, 2002. Annual reviews will be conducted each fall or spring to keep Licensees apprised of their performance and to enable early response to any emerging problems. These reviews will be primarily a forum for discussing problems and information exchange. They will not be an annual "grading" session. The discussions and issues raised at the annual reviews will be recorded and maintained for use and reference in the formal five-year review.

IV. WHAT ARE THE EVALUATION CRITERIA?

There are two major areas of evaluation: 1) implementation of the first 5 years of the 1997 Forest Management Plan, and 2) development of the 2002 Forest Management Plan.

1) Implementation of 1997 Forest Management Plan

In 1994, DNRE introduced a document entitled "A Vision for New Brunswick Forests, Goals & Objectives for Crown Land Management". The Vision document outlines the goals and objectives for all Crown land forest management values, such as; timber, wildlife habitat and biodiversity conservation, water quality, etc. This document also identifies the plan format requirements and the schedule for development of the management plans. The Vision document will be updated every five years to provide a foundation for the development of each subsequent management plan.

Achievement of the management objectives identified in the 1994 Vision document hinges upon implementation of the management strategy approved in the 1997 Forest Management Plan. This strategy is the product of an array of management activities and their combined influence on the development of the forest. Therefore, the first phase of the performance assessment addresses how successful the Licensee was at implementing the management activities between 1997 and 2002 as identified in the 1997 Management Plan. Specifics of the assessment relate to:

a) Basic Silviculture

The approved 1997 Management Plans, have identified for the general forest, minimum levels of softwood planting and precommercial thinning considered essential for achieving specific sustained harvest levels of softwood and hardwood. Implementation of anything less than these minimum levels will have a negative effect on harvest sustainability. Thus, evaluation of Licensees' operational silviculture programs can be used as a measure of performance. In this context, the measure of Licensee silviculture performance will be:

i) The total area of softwood planting implemented to standard in the general forest during the period, as a ratio of the total area approved in the Management Plan.*

ii) The total area of precommercial thinning implemented to standard in the general forest during the period, as a ratio of the total area approved in the Management Plan.*

Performance will be deemed successful if each of these ratios are equal to or greater than 0.95. The period for this evaluation is from April 1, 1997 to March 31, 2002.

* Provided these areas are actually available for treatment.

b) Remedial Treatments

For 1997 Management Plan wood supply expectations to be met, plantations and precommercially thinned stands must develop as forecast and be available for harvest at the designated time and volume. To achieve this, standards have been established to differentiate stand stocking, competition, and density conditions under which yield expectations will and will not be met. With regard to precommercially thinned areas, standards are set at the time of treatment and areas are assumed to remain at standard through to harvest and are not part of remedial treatment evaluation.

In 1996 traditional 5th year surveys were abandoned in favour of a suite of surveys targeting the regenerating landbase (see Characterization of Regenerating Forest Stands on NB Crown Lands, Erdle, 1996). As a result, plantations (full and fill planted areas) are now assessed at 5 and 10 years after treatment as follows:

i) Plantation Status: at 5 years each plantation is visually assessed for stocking and hardwood competition standards (minimum of 75% softwood stocking and maximum of 25% of area stocked to softwood over topped by hardwood).

ii) 10th year Plantation Survey: at 10 years each plantation is formally surveyed to assess stocking and density standards (minimum of: 75% softwood stocking, and 65% of stocked softwood plots with 1 500-3 000 stems/ha).

For this evaluation, all plantations established between 1991 and 1996 inclusive must have been assessed under the Plantation Status system. Any deemed below stocking standards must be remedially treated prior to March 31, 2002 (1996 plantations must be scheduled for treatment in 2002). Licensees will continue to be responsible for reporting overtopping (as per the FMM) but it will not be a performance evaluation criteria.

In addition, any plantations established prior to 1992 that failed the old 5th year survey and have not been remedial treated must have been assessed under the 10th Year Plantation Survey. Any full plantations not meeting stocking and/or density standards must be remedially treated prior to March 31, 2002 (1991 plantations must be scheduled for treatment in 2002). Any fill plantations not meeting stocking standards must be remedially treated by the same date.

Failure to remedy sub-standard plantations (as defined by the FMM) will cause reduced yields, thereby jeopardizing future wood supplies.

Consequently, unacceptable management performance will occur if less than 95% of the planted area requiring stocking and/or density modification (in the years noted above) has been remedially treated.

While most plantations will be of sufficient height at 10 years of age to allow remedial treatment, it is recognized that a small minority may not be eligible. In these cases, with the agreement of the RRM, the 10th year survey and subsequent treatment may be delayed up to a maximum of 5 years. Spacing of over dense plantations should be carried out as soon as the stand meets spacing criteria as outlined in the FMM. Where stocking is sub-standard and planting is the remedial measure, the treatment must be made within the current five-year period. If the area requiring planting cannot be effectively treated, the Licensee has the option to establish a new plantation of equivalent area at its own expense.

c) Harvesting

i) The total sustainable harvest level approved for each license area is derived from the following components of the forest:

- softwood forest area
- hardwood forest area
- deer wintering area management units
- mature coniferous forest habitat
- watercourse buffer zones.

The volume identified from the latter three components is area based, and its realization is subject to the extent of harvest operations actually conducted within these land bases. As such, these components of the sustainable harvest level are not guaranteed. Furthermore, any shortfall from these three components cannot be offset by a corresponding increase in harvest volume from the softwood or hardwood forest areas. Doing so would compromise the sustainability of these two components. In this context, the measure of successful harvest scheduling will be:

1) the softwood volume harvested from the softwood forest during the first period, as a ratio of the sustainable level identified from that land base in the Management Plan;

2) the hardwood volume harvested from the hardwood forest during the first period, as a ratio of the sustainable level identified from that land base in the Management Plan.

3) The total volume of softwood and hardwood harvested from all forest components over the five-year period, as a ratio of the five-year aggregate of the annual sustainable harvest levels identified for each of these two species groups.

Performance will be deemed successful if each of these ratios do not exceed 1.01.

The data base for this evaluation component will include harvest volumes for 1997-98 through to, and including, the 2001-2002 operating year.

ii) Timber harvesting in deer wintering area management units (DWAMU) and mature coniferous forest habitat (MCFH) is undertaken to achieve habitat objectives approved in DWA and Forest Management Plans. The specific details of treatments are described in the annual Operating Plan and the Licensee is responsible for implementing the approved pre/post treatment habitat status. Should the Licensee incur penalties for *failure to comply with the approved pre/post treatment habitat status* on more than 10 percent of the total number of blocks harvested in DWAMU and MCFH, then the Licensee will have failed to perform satisfactorily. The evaluation period is from April 1, 1999 to March 31, 2002.

iii) Watercourse buffer zones are maintained between harvesting operations and watercourses to protect water quality, aquatic habitat and other values as specified in the Operating Plan. The Licensee is responsible for establishing the objective(s) for individual watercourse buffer zones (in consultation with DNRE) and maintaining the appropriate buffer zone considering the requirements outlined in Watercourse Buffer Zone Guidelines for Crown Land Forestry Activities (DNRE). Should the Licensee incur penalties for *failure to maintain buffer zones appropriate for the approved objective(s)*, on more than 10 percent of the harvest blocks with watercourses, then the Licensee will have failed to perform satisfactorily. The evaluation period is from April 1, 1999 to March 31, 2002.

iv) To protect water quality and aquatic habitat, machine use in and adjacent to watercourses is not permitted, except for road and crossing construction. The Licensee is responsible to ensure that road and crossing construction is restricted to the purposes and locations approved in the Operating Plan. All other use of machines in or adjacent to a watercourse are considered unauthorized and subject to penalties. If the Licensee incurs penalties for

unauthorized machine operation in or adjacent to a watercourse on more than 10 percent of the harvest blocks with watercourses, then the Licensee will have failed to perform satisfactorily. The evaluation period is from April 1, 1997 to March 31, 2002.

d) Watercourse Crossing

Watercourse crossing standards are designed to provide unrestricted fish passage, the ability to discharge low, normal, and high water events while remaining stable, as well as, to limit the addition of sediment into the watercourses. The introduction of sediment can alter water quality and aquatic habitat, which is difficult to remedy. The Licensee is responsible for installing watercourse crossings to standards laid out in the FMM and all relevant Provincial and Federal acts and regulations. Should the Licensee incur a penalty for *improperly installed watercourse crossing* (see Appendix 1) on more than 5% of the total number of crossings installed, then the Licensee will have failed to perform satisfactorily. The evaluation period is from April 1, 1997 to March 31, 2002.

e) DWAMU Management

The Forest Management Plan outlines the Licensee's strategy for management of deer winter habitat on the license. To follow through on this strategy it is essential that DWAMU Management Plans be prepared and implemented for appropriate area of DWAMUs, including follow-up on DWAMU Management Plans approved in the previous period. Should the Licensee not develop and implement DWAMU Management Plans for at least 75 percent of the total DWAMU area identified in both a) and b) below, then the Licensee will have failed to perform satisfactorily. The total hectares of DWAMU identified for management from 1997 to 2002 is the sum of:

a) the total area of DWAMUs with plans approved in the previous period (1992-1997) which had harvest scheduled to occur between 1997 and 2002, plus

b) the total area of DWAMUs identified in the 1997 Forest Management Plan for which DWAMU Management Plans will be submitted for the first time between 1997 and 2002.

The Licensee may, subject to DNRE approval, choose to develop and implement first-time management plans for DWAMU other than those they identified in the 1997 Forest Management Plan and have them counted towards performance. The evaluation period is from April 1, 1997 to March 31, 2002.

2) Development of the 2002 Forest Management Plan

The Management Plan underpins all future forest management activities and evaluation of its quality forms an important part of Licensee Performance.

Evaluation of the 2002 Forest Management Plan will focus on the Licensees' performance related to their ability to meet objectives as outlined in the December, 1999 version of the document entitled: "A Vision for New Brunswick Forests: Goals and Objectives for Crown Land Management".

In the Management Plan, the Licensee must demonstrate an ability to:

i) incorporate management objectives as defined in the 1999 version of the Vision document;

ii) design and develop an appropriate spatial management strategy.

Specifically, minimum standards for management plan preparation will be defined for:

i) quality of resource information;

ii) management aspects addressed;

iii) analysis methodology;

iv) content and presentation format;

v) plan submission schedule.

With regard to the submission schedule, there are three critical dates as follows:

i) August 31, 2000: Submission of required elements of the management plan proposal to DNRE for approval, providing DNRE defines objectives in the VISION document by December 31, 1999.

ii) April 30, 2001: Submission of spatial management plan to DNRE for approval, providing DNRE reviews management plan proposals by October 31, 2000.

iii) January 31, 2002: Submission of finalized spatial management plan incorporating results of DNRE review, providing DNRE reviews blocked plans by September 30, 2001.

Detailed minimum standards for all three dates will be developed by DNRE with Licensee participation prior to December 31, 1999 and will be used to assess each of the submissions. Providing DNRE meets its obligations as indicated above for the three critical dates, if minimum standards are not met, the Regional Resource Manager shall not accept the plan and Licensee management planning performance will be deemed unsatisfactory. In the event that either of the last two critical dates are impacted by a previously missed date due to DNRE action, then those critical dates will be delayed by a corresponding time period.

V. WHAT ARE THE PERFORMANCE THRESHOLDS?

TABLE 1
Licensee Performance Measures and Thresholds

Implementation of 1997 Forest Management Plans			
Item		**Measure**	**Threshold**
Basic Silviculture	i.	Ratio of the total area of softwood planting implemented in the general forest, to the total area approved in the Management Plan.	≥.95
	ii.	Ratio of the total area of pre-commercial thinning implemented in the general forest, to the total area approved in the Management Plan.	≥.95
Remedial Treatments		Percentage of plantation area identified as requiring stocking and/or density modification that was successfully treated.	≥.95
Harvesting	i.	Ratio of softwood volume harvested from the softwood forest to identified sustainable level.	≤1.01
		Ratio of hardwood volume harvested from the hardwood forest to identified sustainable level.	≤1.01
		Ratio of the total volume of softwood and hardwood harvested from all forest components over the five-year period to the five-year aggregate of the annual sustainable harvest levels identified for each of these two species groups.	≤1.01
	ii.	Ratio of the total number of harvest blocks for which a penalty was incurred for *failure to comply with the approved pre/post treatment habitat status* to the total number of blocks harvested in DWA and MCFH.	≤ .10
	iii.	Ratio of the total number of harvest blocks for which a penalty was incurred for failure to maintain a buffer zone appropriate for the approved objective(s) to the total number of harvest blocks with associated watercourses.	≤ .10
	iv.	Ratio of the total number of harvest blocks for which a penalty was incurred for *unauthorized machine operation in or adjacent to a watercourse* to the total number of harvest blocks with associated watercourses.	≤ .10
Watercourse Crossings		Ratio of the total number of crossings (culvert, bridge) installed for which a penalty was incurred for *improperly installed watercourse crossing* to the total number of watercourse crossings installed.	≤ .05

DWAMU Management	i.	Ratio of the total area of DWAMU for which "follow-up" management plans were approved and implemented to the total area of DWAMU with plans approved in the previous period (1992-1997) which had harvest scheduled to occur between 1997 and 2002.	≥ .75
	ii.	Ratio of the total area of DWAMU for which first-time management plans were approved and implemented in Period 1 to the total area of DWAMU identified for Period 1 management plan development in the Forest Management Plan.	≥ .75
2002 Forest Management Plan	i.	Submission of management plan proposal by August 31, 2000.	All minimum standards in management plan proposal met by August 31, 2000.
	ii.	Submission of spatial management plan by April 30, 2001.	All minimum standards in spatial management plan met by April 30, 2001.
	iii.	Submission of finalized management plan by January 31, 2002.	All minimum standards in finalized management plan met by January 31, 2002.

APPENDIX 1

Performance Related Penalties Associated With Watercourse Crossings

a) Unauthorized travel through watercourse with vehicle/equipment in relation to crossing construction.

b) Excessive bulldozing, excavation fording, or machine operation in a watercourse during crossing construction, road construction, or yarding.

c) Unauthorized grubbing of ground vegetation on a road right of way within 30 meters of watercourse > 0.5 meters in width.

d) Installed watercourse crossing (culvert, bridge) smaller in size than that specified in operating plan.

e) Unauthorized installation of watercourse crossing.

f) Culvert:
- not properly stabilized (Appendix 10 FMM),
- length inadequate to prevent steep slopes in excess of 2:1 (H:V),
- culvert slope not appropriate such that:
- culvert slope > 0.5% on streambed slopes < 1%
- approved fish passage measures not incorporated in culverts with slope > 0.5%
- culvert must be imbedded 15 cm in streambed.

g) Grubbing of ground vegetation on road right of way within 10 meters of a watercourse < 0.5 meters in width.

January 29, 1999

LICENSEE PERFORMANCE

EVALUATION

1992 – 1997

LICENSEE PERFORMANCE EVALUATION
1992-1997

There are ten Crown Timber Licenses within New Brunswick. These are managed by eight forestry companies under 25 year Forest Management Agreements with the Department of Natural Resources and Energy under the *Crown Lands and Forests Act*. Section 31 of the Act requires that Licensee Performance be reviewed at five-year intervals. See Table 1 for a listing of Crown Timber Licenses and the associated Licensees.

The management system established under the *Crown Lands and Forests Act* is monitored by the Department of Natural Resources and Energy on behalf of government and citizens of New Brunswick. Under this system government sets objectives and standards for the management of provincial Crown lands and the Licensee is to plan and carry out the activities required to achieve those objectives.

Under the *Crown Lands and Forests Act*, the Minister of Natural Resources and Energy evaluates Licensee forest management performance at five-year intervals. Performance evaluation results are used in the Minister's decision to extend the length of the Forest Management Agreement for each license. Performance reviews were conducted in 1987 and in 1992. The review of the third five-year management period is now complete. This review evaluated Licensee performance with respect to the following six components:

The 1997 Management Plan;
Harvest Schedule;
Basic Silviculture Level;
Remedial Treatment of Basic Silviculture Treatments;
Fish Habitat Protection (Watercourse Crossings);
Wildlife Habitat Management.

A description of each component, the associated performance measurement criteria, and thresholds of acceptance for each is outlined in Appendix 1.

A summary of Licensees performance with respect to each of the six evaluation components is presented in Table 2. The following narrative provides additional detail for each component.

1997 Management Plan

Forest Management Plans are based on an 80 year projection of sustainable timber supply and an 80 year projection of wildlife habitat supply. The Management Plan outlines the planned actions on the license for a 25 year period to meet government's timber and non-timber objectives. Management plans are updated every 5 years with the next revision scheduled for 2002.

Licensees were evaluated on the timing and content of the initial submission of their 1997 Forest Management Plans. The initial plans submitted by 6 Licensees met the established standards of the Department, while those submitted by Stone Container (Canada) Inc. and Fraser Papers Inc. fell short of those standards. These two Licensees subsequently revised their initial submissions to meet Department standards prior to the start of the 1997 operating year.

1987-1992 ACTIVITIES

Harvest Scheduling

Harvest scheduling over the last five years was carried out by all Licensees to an acceptable level as per the stated schedule outlined in the 1992 approved Management Plan. As a result of a severe windstorm in the fall of 1994, the original harvest schedules on Licenses 3, 4, 6, and 10 were adjusted to accommodate the salvage of significant volumes of blowdown timber throughout north-central New Brunswick. The potential impact of this natural catastrophe was greatly mitigated by the cooperation of all Licensees in

addressing the salvage of blowdown timber.

Silviculture

All Licensees completed the required level of basic silviculture on their respective licenses. Overall, 34 474 ha were planted and 67 358 ha were pre-commercially thinned. In total, Licensees silviculturally treated 101 832 ha during the five-year period, which represents an increase of 22% of that treated in the previous period. This increase was supported by the introduction of an expanded silviculture program in 1995.

Remedial Treatment/Silviculture

Only two of the eight licensees met the standard established for remedial treatment. Remedial treatment involves thinning over dense plantations, or re-planting understocked plantations in order for them to meet the established five-year performance standards. Those Licensees, which failed to meet this standard have all formulated schedules to treat the backlog areas during the current five-year period. Adherence to those schedules will be monitored by the Department.

Fish Habitat Protection (Watercourse Crossings)

All Licensees successfully met the standard established for watercourse crossing installation. In the few cases where activities associated with watercourse crossings were not completed to standard, fines were levied and the Licensees undertook remedial treatment to correct the problem and prevent any long-term damage to fish habitat.

Wildlife Habitat Management

The wildlife habitat management component of Licensee performance was assessed through the following three measures:

1. Percent of harvest blocks in or adjacent to site specific wildlife habitat which were operated without incurring penalties.

2. Percent of harvest blocks in site specific wildlife habitat which achieved the harvest prescription.

3. Percent of the Deer Wintering Area Management Unit area identified for management plan development in the five-year period for which plans were formulated and implemented.

The standards for the first two measures were met by all Licenses. Two Licensees, J. D. Irving Ltd. and Fraser Papers Inc., failed to meet the third standard. These two Licensees have formulated schedules to implement management plans for the backlog areas during the current five-year period, and their performance in this regard will be monitored by the Department. Both Licensees made significant progress in this regard in 1997.

Evaluation Criteria are now being developed for the next five-year review to be conducted in 2002.

TABLE 1

CROWN TIMBER LICENSES AND ASSOCIATED LICENSEES

License Name	Licensee
Upsalquitch	Avenor Maritimes Inc.
Nepisiguit	Stone Container (Canada) Inc.
Lower Miramichi	Repap New Brunswick
Upper Miramichi	Repap New Brunswick
Kent	Eagle Forest Products Ltd.
Queens-Charlotte	J. D. Irving, Limited
Fundy	Irving Pulp and Paper Limited
York	St. Anne-Nackawic Pulp Co. Ltd.
Carleton	Juniper Lumber Co. Ltd.
Restigouche-Tobique	Fraser Papers Inc.

TABLE 2
SUMMARY OF PERFORMANCE OF CROWN TIMBER LICENSEES FOR PERIOD 1992-1997

Components of the Evaluation Criteria	Performance Measurement	Acceptable Threshold	Licensee Performance Levels (Percent)									
			1	2	3	4	5	6	7	8	9	10
Management Planning	Standards for Forest Management plans relating to method of construction, content and timing of information.	Acceptance by RRM of initial plan	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Harvest Schedule	% of total softwood volume harvested which was sourced from Period I harvest blocks of the Management Plan.	95%	100	100	100	100	100	100	100	100	100	100
Basic Silviculture	% of basic silviculture requirement which was completed to acceptable standards.	95%	99	102	*** 97		172	165	151	133	111	***** 97
Remedial Treatments	% of area of 1983-1990 plantations designated for stocking and/or density modification which have been treated to acceptable standards.	95%	38	1	34	8	**** 0	37	4	100	100	9
Watercourse Crossings	% of watercourse crossings which have been installed to acceptable standards.	95%	98	95	97	99	96	99	96	98	96	98
Wildlife Habitat	1. % of harvest blocks in or adjacent to site specific wildlife habitat for which penalties were not incurred for harvesting without approval.	95%	98	100	100	100	100	100	99	100	98	99
	2. % of harvest blocks in site specific wildlife habitat which achieved harvest prescriptions.	95%	94	*	100	100	*	100	99	100	96	96
	3. % of the DWAMU area identified for Period I for which Management Plans were submitted and implemented.	75%	141	**	104	98	**	29	38	100	100	23

* Harvest prescriptions for site specific wildlife habitat were not developed.
** The DWAMU landbase was not modelled for habitat intervention.
*** The basic silviculture achievement is averaged across the two Repap licenses due to a shortfall of eligible treatment areas on license number 4.
**** Current licensee; Eagle Forest Products Ltd., assumed management responsibility in latter half of period.
***** The area of basic silviculture treated on the Restigouche-Tobique license includes 722 ha completed by the Region under job creation projects.

Licenses

1. Upsalquitch – Avenor Maritimes Inc.
2. Nepisiguit – Stone Container (Canada) Inc.
3. Lower Miramichi – Repap New Brunswick
4. Upper Miramichi – Repap New Brunswick
5. Kent – Eagle Forest Products Ltd.
6. Queens-Charlotte – J. D. Irving, Limited
7. Fundy – Irving Pulp & Paper Limited
8. York – St. Anne-Nackawic Pulp Company Ltd.
9. Carleton – Juniper Lumber Co. Ltd.
10. Restigouche-Tobique – Fraser Papers Inc.

APPENDIX 1

LICENSEE PERFORMANCE EVALUATION

FOR PERIOD 1992-97

July 6, 1993

LICENSEE PERFORMANCE EVALUATION

Under the Crown Lands and Forests Act, the Minister of Natural Resources and Energy evaluates Licensee forest management performance at five-year intervals. Performance evaluation results are used in the Minister's decision to extend the length of the Forest Management Agreement for each license. Performance reviews were conducted in 1987 and 1992. The next review will occur in 1997.

This document has been prepared so that all parties are aware of the form and content of the 1997 review. The following addresses five key aspects of the evaluation methodology: (1) Who is being evaluated; (2) Who is making the evaluation; (3) What is the timing of evaluation; (4) What are the elements of the evaluation; and (5) What are acceptable thresholds for elements of evaluation.

I. **Who is being evaluated:** The Licensee Company is being evaluated, not individuals within the Company. Licensees will not be evaluated on operations or activities which are not under their control.

II. **Who is making the evaluation:** The Minister of Natural Resources and Energy makes the formal evaluation using information provided by Departmental staff. Designation of the form and make-up of any advisory panel will be made at the discretion of the Minister.

III. **What is the timing of evaluation:** Information used in evaluation will be accumulated over the period April 1992 to April 1997, and the evaluation itself will be performed between April 1 and October 1, 1997. Annual reviews will also be conducted each fall or spring to keep Licensees apprised of their performance and to enable early response to any emerging problems. These reviews will be primarily a forum for discussing problems and information exchange. They will not be an annual "grading" session. The discussions and issues raised at these annual reviews will be recorded and maintained for

that details the strategies that are to be implemented. This non-spatial proposal will be reviewed by DNRE and the number of modifications made subsequent to plan submission will have no bearing on Licensee planning performance providing all minimum standards are met initially. Any modifications recommended will be incorporated by the Licensee into the final management plan submitted by the Licensee.

A Regional Resource Manager shall not accept a plan if minimum standards are not met for either the spatial or non-spatial components. In such a case, Licensee's management planning performance will be deemed unsatisfactory. Should this occur, the Licensee can appeal for a second judgement by committee, appointed by the Minister, composed of (1) one representative from another Licensee Company, (2) one representative from another Departmental Region, and (3) one representative from Timber Management or Fish and Wildlife Branch (depending on the area of concern). This Committee shall consult with the appropriate Licensee and DNRE staff and will compare the plan to the minimum acceptable standard and will recommend to the Minister regarding acceptability of the plan in question.

Management plan preparation standards will be developed with Licensee and Departmental participation prior to September 1994. This will allow ample time for development of the 1997 management plans to satisfy the minimum standards.

2. MAINTENANCE OF SUSTAINABLE HARVEST

Successful Licensee management performance must maintain the sustainable harvest from the license in both the long and short term. Key factors affecting sustainability are (a) the harvest schedule, (b) basic silviculture, and (c) remedial treatments in managed stands. Performance on each of these three factors will be evaluated individually.

(a) Harvest Schedule

The location and timing of harvests in the accepted Management Plan were determined to maximize sustainable harvest levels while meeting all other management objectives. The planned schedule for a license was approved as it performed satisfactorily with

The period for this evaluation will include 1992-93 up to and including 1996-97.

(c) **Remedial Treatments**

For wood supply expectations to be met, plantations and precommercially thinned stands must develop as forecasted and be available for harvest at the designated time, with the designated volume. Stand performance below expectations with respect to either volume or timing, will jeopardize the sustainability of future wood supplies.

Fifth year standards are set to differentiate stand stocking and density conditions under which yield expectations will and will not be met. Successful management performance will ensure that all treated stands meet or exceed those standards. Remedial measures of spacing or fill planting can be employed to reduce density and increase stocking, respectively, to move all stands above the minimum standards.

The measure of Licensee performance in this regard will be the proportion of those plantations identified for remedial treatment which are treated so that they surpass 5th year standards. Failure to remedy sub-standard stands will cause reduced yields, which will jeopardize future wood supplies. Failure to remedy sub-standard conditions is unacceptable management performance.

Plantations requiring spacing must be of sufficient height to make the treatment practical. Spacing of overdense plantations should be carried out as soon as the stand meets spacing criteria as outlined in the FMM. Where stocking is sub-standard and planting is the remedial measure, the treatment must be made in the current five year period. If the area requiring planting cannot be effectively treated, the Licensee has the option to establish a new plantation of equivalent area at its own expense.

The plantations subject to this evaluation criteria are those established in 1986-1991 inclusive, plus those 1983, 1984 and 1985 plantations on which the required remedial

horizon at levels equal to or greater than those set by DNRE.

DNRE has identified deer wintering area management units (DWAMU) on each license. The management objective for each DWAMU is to maximize the sustainable supply of deer critical winter habitat. Forest Management Plans submitted in 1992 identified strategies for habitat management within the DWAMU landbase. Licensees are required to submit individual DWAMU Management Plans for units in which they intend to harvest during Period 1.

DNRE has identified an objective for mature coniferous forest habitat (MCFH) to be maintained on each license. For the purpose of Licensee Performance Evaluation, MCFH areas will be considered a site specific habitat.

As errors in Forest Development Survey data can have a significant influence on plan development for small landbases, DWAMU Management Plans and harvesting in other site-specific wildlife habitats will not be approved by DNRE unless Licensees can demonstrate that the data used to build plans are of sufficient quality. Minimum information requirements will be established by DNRE in consultation with licensees and outlined in a management planning standards document. It is the Licensees responsibility to develop habitat management plans, however, recognizing the newness of this activity DNRE will assist in the process as resources permit.

The location, timing, and type of harvest operations on both site-specific wildlife habitats and the unrestricted forest that are specified in the accepted Management Plans were determined to create a particular distribution of stand types and ages. The planned schedule was approved in part because it performed satisfactorily with regard to objectives for wildlife habitat. Successful forest performance with regard to habitat supply should occur with successful implementation of the agreed harvest schedule. However, Licensees are expected to recognize planning errors caused by inadequate inventory and propose adjustments to operations identified in either Forest or DWAMU Management Plans that will not fulfil the intent of the management action, as it is described in the plan.

The period of this evaluation will include the years 1992-93 to 1996-97.

Where Sub-licensees carry out their own operations under the supervision of DNRE, the Licensees are not accountable for violations or rehabilitation in relation to watercourse crossings or fish habitat protection.

PERFORMANCE THRESHOLDS

Table 1 presents the expected thresholds of performance for each of the components of the evaluation criteria. Meeting all thresholds is sufficient grounds for recommending license renewal while failure on any one component is sufficient grounds for recommending non-renewal.

METHODS OF MEASUREMENT ASSOCIATED WITH LICENSEE EVALUATION CRITERIA

Item: Management Planning

Initial Management Plan submitted by the Licensee will be evaluated based on established Management Plan minimum standards. The Licensee will have the opportunity to request a second opinion if initial plan is not accepted by a RRM as per outlined procedure in evaluation criteria.

Item: Harvest Schedule

The method used to measure or determine this item will be on a full harvest block basis. The only timber considered to be harvested outside "period one" will be that volume of timber harvested in cut blocks proposed by the Licensee in period two or beyond for reasons that are not mutually agreed by the RRM.

Determination of threshold acceptance will not be based on a comparison of block layout (as outlined in the Operating Plan) and the actual block configuration as outlined in the Annual Report. Unauthorized harvest which takes place during the harvest season will be handled in the normal fashion, i.e., with penalties and/or termination of harvest operations.

Item: Basic Silviculture

The amount of basic silviculture carried out to standard and reimbursed by DNRE over the period 1992 to 1996 will be compared to the amount of basic silviculture identified in the approved Management Plan.

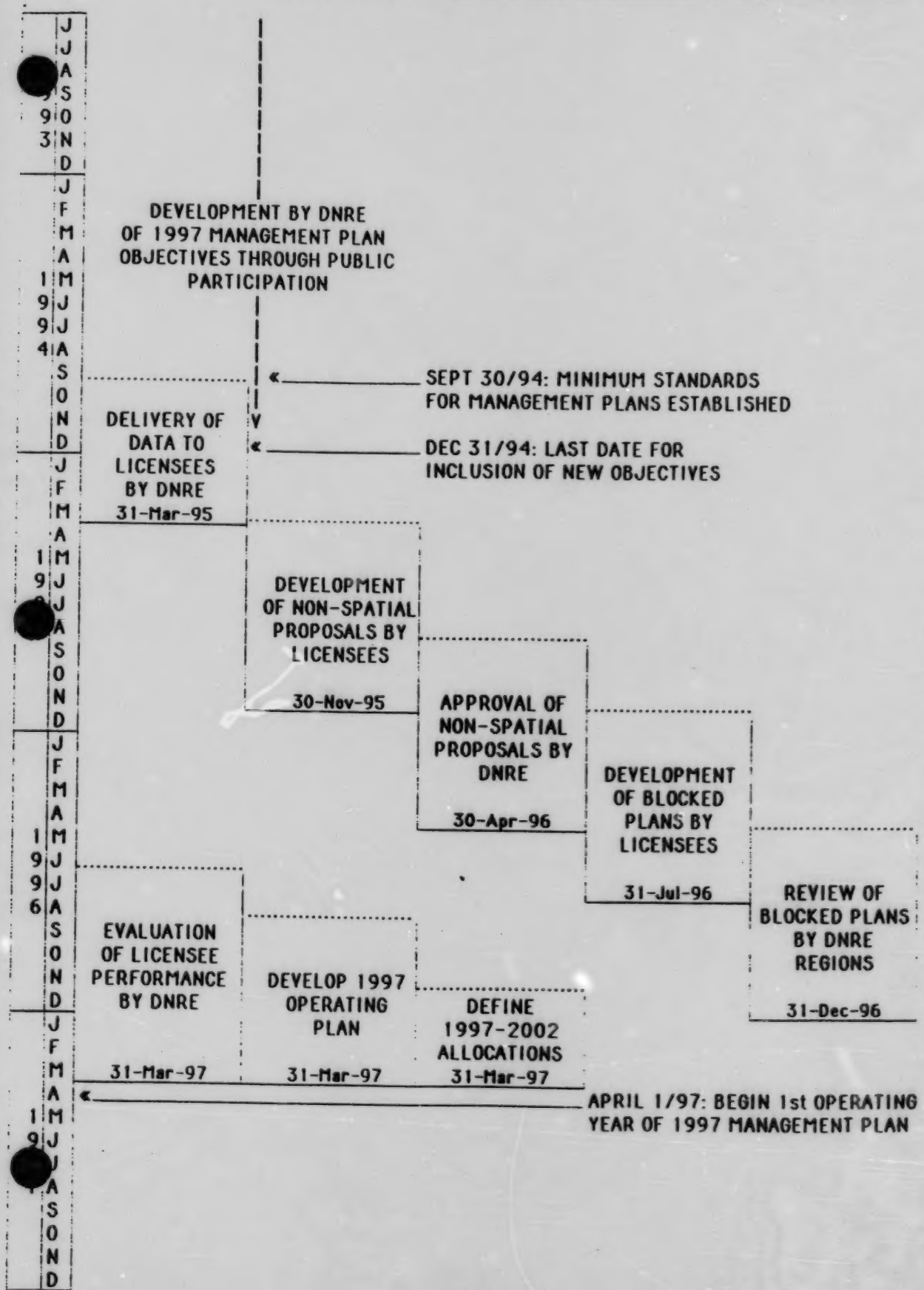
Item: Remedial Treatment

The proportion of plantations identified for remedial treatment by DNRE (based on established plantation performance criteria) which are treated to meet or exceed 5th year standards. For overdense conditions, the Licensee may delay treatment until the

be the measure of success instead of using volume harvested (m^3). The threshold levels for a DWAMU will be the same as those established for the unconstrained forest.

There will be cases which are 'not cut and dry' one way or the other. This evaluation must be conducted using judgement and discretion in the same manner that the fish, wildlife and timber regulation infractions are currently enforced.

1997 MANAGEMENT PLANNING SCHEDULE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1997
DEVELOPMENT BY DNRE OF 1997 MANAGEMENT PLAN OBJECTIVES THROUGH PUBLIC PARTICIPATION
SEPT 30/94: MINIMUM STANDARDS FOR MANAGEMENT PLANS ESTABLISHED
DEC 31/94: LAST DATE FOR INCLUSION OF NEW OBJECTIVES
DELIVERY OF DATA TO LICENSEES BY DNRE
31-Mar-95
DEVELOPMENT OF NON-SPATIAL PROPOSALS BY LICENSEES
30-Nov-95
APPROVAL OF NON-SPATIAL PROPOSALS BY DNRE
30-Apr-96
DEVELOPMENT OF BLOCKED PLANS BY LICENSEES
31-Jul-96
REVIEW OF BLOCKED PLANS BY DNRE REGIONS
31-Dec-96
EVALUATION OF LICENSEE PERFORMANCE BY DNRE
31-Mar-97
DEVELOP 1997 OPERATING PLAN
31-Mar-97
DEFINE 1997-2002 ALLOCATIONS
31-Mar-97
APRIL 1/97: BEGIN 1st OPERATING YEAR OF 1997 MANAGEMENT PLAN

ÉVALUATION DE L'ACTIVITÉ DES TITULAIRES DE PERMIS

1992-1997

ÉVALUATION DE L'ACTIVITÉ DES TITULAIRES DE PERMIS

1992-1997

On dénombre dix permis de coupe sur les terres de la Couronne au Nouveau-Brunswick. Ces permis sont administrés par huit sociétés forestières en vertu d'ententes d'aménagement forestier de 25 ans conclues avec le ministère des Ressources naturelles et de l'Énergie aux termes de la *Loi sur les terres et forêts de la Couronne*. L'article 31 de la *Loi* prévoit une révision de l'activité des titulaires de permis tous les cinq ans. Le tableau 1 renferme une liste des permis de coupe sur les terres de la Couronne et des titulaires de ces permis.

Le ministère des Ressources naturelles et de l'Énergie surveille au nom du gouvernement et des citoyens du Nouveau-Brunswick, le système d'aménagement établi en vertu de la *Loi sur les terres et forêts de la Couronne*. Le système en question permet au gouvernement de fixer des objectifs et des normes pour l'aménagement des terres de la Couronne provinciales et il enjoint les titulaires de permis à planifier et exécuter les travaux nécessaires pour réaliser ces objectifs.

Conformément à la *Loi sur les terres et forêts de la Couronne*, le ministère des Ressources naturelles et de l'Énergie évalue l'activité des titulaires de permis en matière d'aménagement forestier tous les cinq ans. Les constatations faites lors de l'évaluation éclairent le Ministère dans sa décision au sujet du prolongement de la durée de l'entente d'aménagement forestier relative à chaque permis. Des évaluations de l'activité des titulaires de permis ont été effectuées en 1987 et en 1992. L'évaluation de la troisième période d'aménagement de cinq ans est maintenant terminée. On a alors évalué l'activité des titulaires de permis par rapport aux six aspects suivants :

le plan d'aménagement de 1997,
la programmation de la récolte,
le niveau de travaux sylvicoles de base,
les traitements de correction des travaux sylvicoles de base,
la protection de l'habitat du poisson (passages de cours d'eau),
l'aménagement de l'habitat faunique.

L'annexe 1 décrit chacun de ces aspects ainsi que les critères d'évaluation de l'activité connexes et les seuils d'acceptabilité face à chaque aspect.

Le tableau 2 présente un sommaire de l'activité des titulaires de permis par rapport à chacun des six aspects de l'évaluation. Le texte qui suit fournit des détails supplémentaires au sujet de chaque aspect.

Plan d'aménagement de 1997

Les plans d'aménagement forestier sont basés sur une projection de 80 ans des réserves de bois durables et de l'habitat faunique existant. Le plan d'aménagement définit les activités projetées sur le permis pendant une période de 25 ans pour réaliser les objectifs du gouvernement reliés à l'exploitation forestière et ceux reliés à d'autres fins. On met ces plans d'aménagement à jour tous les cinq ans; la prochaine révision des plans est prévue pour 2002.

On évalue les titulaires de permis en fonction du calendrier et du contenu des plans d'aménagement forestier de 1997 initialement soumis. Les plans initiaux soumis par six titulaires de permis répondaient aux normes du Ministère, tandis que ceux soumis par la Stone Container (Canada) Inc. et la Fraser Papers Inc. ne répondaient pas à ces normes. Ces deux titulaires de permis ont subséquemment modifié leurs plans initiaux pour se conformer aux normes du Ministère avant le début de l'année d'exploitation 1997.

ACTIVITÉS DE 1987-1992

Programmation de la récolte

Tous les titulaires de permis ont programmé leurs travaux de récolte au cours des cinq dernières années d'une façon acceptable d'après le calendrier établi dans leur plan d'aménagement approuvé de 1992. À la suite d'une tempête de vent survenue au cours de l'automne 1994, on a rajusté les calendriers initiaux de récolte à l'intérieur des permis 3, 4, 6 et 10 afin de permettre la récupération de volumes substantiels de chablis partout dans le centre-nord du Nouveau-Brunswick. La coopération reçue de tous les titulaires de permis dans la récupération du chablis a grandement atténué les effets possibles de cette catastrophe naturelle.

Sylviculture

Tous les titulaires de permis ont réalisé le niveau exigé de travaux de sylviculture de base à l'intérieur de leurs permis respectifs. Dans l'ensemble, 34 474 ha ont été plantés et 67 358 ha ont été soumis à des éclaircies précommerciales. Les titulaires de permis ont effectué des travaux sylvicoles sur 101 832 ha au total au cours de la période de cinq ans, ce qui représente une augmentation de 22 p. 100 par rapport à la superficie traitée au cours de la

période précédente. Cette augmentation a été soutenue par l'implantation d'un programme de sylviculture élargi en 1995.

Traitements sylvicoles correctifs

Seulement deux des huit titulaires ont satisfait à la norme établie en fait de traitements correctifs. Les traitements correctifs comportent un éclaircissage des plantations denses ou une replantation des plantations relativement déficientes pour qu'elles répondent aux normes de rendement quinquennales établies. Les titulaires de permis qui n'ont pas satisfait à cette norme ont tous préparé des calendriers prévoyant le traitement des secteurs en retard au cours de la période de cinq ans actuelle. Le Ministère surveillera si les titulaires de permis respectent ces calendriers.

Protection de l'habitat du poisson (passages de cours d'eau)

Tous les titulaires de permis ont satisfait à la norme établie quant à l'installation des passages de cours d'eau. Dans les quelques cas où les activités associées aux passages de cours d'eau n'ont pas été conformes à la norme, on a imposé des amendes et les titulaires de permis ont apporté des correctifs en vue de rectifier le problème et d'empêcher un endommagement de longue durée de l'habitat du poisson.

Aménagement de l'habitat faunique

On a évalué le rendement des titulaires de permis relativement à l'aspect de l'aménagement de l'habitat faunique au moyen des trois critères ci-dessous :

1. Le pourcentage des quadrats de coupe se trouvant à l'intérieur ou à proximité d'un habitat faunique localisé que le titulaire a déboisé sans se voir imposer de pénalité.

2. Le pourcentage des quadrats de coupe à l'intérieur d'un habitat faunique localisé où le titulaire a respecté les prescriptions de récolte.

3. Le pourcentage des unités d'aménagement d'aires d'hivernage du chevreuil dont l'aménagement était prévu au cours de la période de cinq ans pour laquelle des plans d'aménagement ont été formulés et mis en œuvre.

Tous les titulaires de permis ont satisfait aux normes relatives aux deux premiers critères. Deux titulaires de permis, la J. D. Irving et la Fraser Papers Inc. n 'ont pas satisfait au troisième critère. Ces deux titulaires de permis ont préparé des calendriers en vue de mettre en oeuvre des plans d'aménagement visant les secteurs en retard au cours de la période de cinq ans

actuelle; le Ministère surveillera leur rendement à cet égard. Les deux titulaires ont réalisé des progrès appréciables à ce chapitre en 1997.

On est maintenant en train d'élaborer des critères d'évaluation en vue de la prochaine réévaluation quinquennale, qui aura lieu en 2002.

TABLEAU 1
PERMIS DE COUPE SUR LES TERRES DE LA COURONNE ET TITULAIRES DES PERMIS

[illegible]	[illegible]
Upsalquitch	Avenor Maritimes Inc.
Nepisiguit	Stone Container (Canada) Inc.
Bas-Miramichi	Repap New Brunswick
Haut-Miramichi	Repap New Brunswick
Kent	Eagle Forest Products Ltd.
Queens-Charlotte	J. D. Irving, Limited
Fundy	Irving Pulp and Paper Limited
York	St. Anne-Nackawic Pulp Co. Ltd.
Carleton	Juniper Lumber Co. Ltd.
Restigouche-Tobique	Fraser Papers Inc.

TABLEAU 2

SOMMAIRE DE L'ACTIVITÉ DES TITULAIRES DE PERMIS DE COUPE SUR LES TERRES DE LA COURONNE PENDANT LA PÉRIODE DE 1992 À 1997

Aspects visés par les critères d'évaluation	Évaluation de l'activité	Seuil d'acceptabilité	Niveaux d'activité des titulaires de permis (pourcentage)									
			1	2	3	4	5	6	7	8	9	10
Planification de l'aménagement	Normes des plans d'aménagement forestiers ayant trait aux méthodes de construction, au contenu et au calendrier de soumission des renseignements	Acceptation du plan initial par l'ARR	Oui	Non	Oui	Oui	Oui	Oui	Oui	Oui	Oui	Non
Programmation de la récolte	Pourcentage du volume total de résineux récoltés sur les quadrats de coupe de la période I du plan d'aménagement.	95 %	100	100	100	100	100	100	100	100	100	100
Travaux sylvicoles de base	Pourcentage des travaux sylvicoles de base nécessaires réalisés selon des normes acceptables.	95 %	99	102	*** 97		172	165	151	133	111	*** 97
Traitements correctifs	Pourcentage de la superficie des plantations de 1983 à 1990 désignées aux fins d'une modification de la densité relative ou de la densité qui a été traitée selon des normes acceptables.	95 %	38	1	34	8	**** 0	37	4	100	100	9
Passages de cours d'eau	Pourcentage de passages de cours d'eau installés selon des normes acceptables.	95 %	98	95	97	99	96	99	96	98	96	98
Habitat faunique	1. Pourcentage des quadrats de coupe situés à l'intérieur ou à proximité d'un habitat faunique localisé dans le cas desquels les titulaires de permis ne se sont pas vu imposer de pénalités pour des travaux de coupe effectués sans autorisation.	95 %	98	100	100	100	100	100	99	100	98	99
	2. Pourcentage des quadrats de coupe situés à l'intérieur d'un habitat faunique localisé sur lesquels les titulaires se sont conformés aux prescriptions de récolte.	95 %	94	*	100	100	*	100	99	100	96	96
	3. Pourcentage de la superficie des UAAHC désignées pour la période I pour lesquelles des plans d'aménagement ont été soumis et mis en œuvre.	75 %	141	**	98	98	**	29	38	100	100	23

* Aucune prescription de récolte n'avait été définie pour un habitat faunique localisé.

** On n'avait pas modélisé le territoire réservé aux UAAHC en vue d'une intervention sur l'habitat.

*** On a établi la moyenne des travaux sylvicoles de base réalisés sur les deux permis de la Repap en raison d'une pénurie de secteurs de traitement admissibles à l'intérieur du permis numéro 4.

**** Le titulaire de permis actuel, Eagle Forest Products Ltd., a assumé la responsabilité de l'aménagement au cours de la deuxième moitié de la période.

***** Le secteur soumis à des travaux sylvicoles de base sur le permis de Restigouche-Tobique comprend 722 ha où des travaux ont été réalisés par la région dans le cadre de projets de création d'emplois.

Titulaires de permis

1. Upsalquitch – Avenor Maritimes Inc.	6. Queens-Charlotte – J. D. Irving, Limited
2. Nepisiguit – Stone Container (Canada) Inc.	7. Fundy – Irving Pulp & Paper Limited
3. Bas-Miramichi – Repap New Brunswick	8. York – St. Anne-Nackawic Pulp Company Ltd.
4. Haut-Miramichi – Repap New Brunswick	9. Carleton – Juniper Lumber Co. Ltd.
5. Kent – Eagle Forest Products Ltd.	10. Restigouche-Tobique – Fraser Papers Inc.

ANNEXE 1

ÉVALUATION DE L'ACTIVITÉ DES TITULAIRES DE PERMIS PENDANT LA PÉRIODE DE 1992 À 1997

Le 6 juillet 1993

ÉVALUATION DE L'ACTIVITÉ DES TITULAIRES DE PERMIS

Le Ministre des Ressources naturelles et de l'Énergie évalue l'activité des titulaires de permis en matière d'aménagement forestier à des intervalles de cinq ans en vertu de la *Loi sur les terres et forêts de la Couronne*. Le Ministre s'appuie sur les résultats de cette évaluation dans sa décision de prolonger la durée des ententes d'aménagement forestier visant chaque permis. Des évaluations de l'activité des titulaires de permis ont été réalisées en 1987 et en 1992. La prochaine évaluation aura lieu en 1997.

Le présent document vise à mettre toutes les parties au courant de la forme et du contenu de l'évaluation de 1997. Le texte qui suit définit les cinq dimensions clés du processus d'évaluation : 1) qui on évalue; 2) qui effectue l'évaluation; 3) quel est le calendrier d'exécution de l'évaluation; 4) quels sont les aspects évalués; et 5) quels sont les seuils d'acceptabilité face aux aspects évalués.

I. **Qui on évalue :** On évalue la société du titulaire de permis, et non pas les personnes à l'intérieur de la société. On n'évaluera pas les titulaires de permis relativement à des travaux ou des activités qui ne relèvent pas d'eux.

II. **Qui effectue l'évaluation :** Le ministre des Ressources naturelles et de l'Énergie effectue l'évaluation officielle à partir des renseignements que lui fournit le personnel du Ministère. Le Ministre peut mettre sur pied un comité consultatif qui aura la forme et la composition qu'il jugera utile.

III. **Quel est le calendrier d'exécution de l'évaluation :** On accumulera les renseignements utilisés dans l'évaluation au cours de la période d'avril 1992 à avril 1997; on réalisera l'évaluation elle-même entre le 1er avril et le 1er octobre 1997. On effectuera également chaque automne ou chaque printemps des vérifications annuelles afin de tenir les titulaires de permis au courant de leur rendement et de leur permettre de réagir hâtivement si des problèmes surgissaient. Ces vérifications prendront essentiellement la forme d'un forum permettant aux intéressés de discuter des problèmes et d'échanger des renseignements. Elles ne constitueront pas des séances de " notation " annuelles. On prendra en note et on conservera les points discutés et les questions soulevées lors de ces vérifications annuelles en vue de les consulter et de les utiliser lors de l'évaluation quinquennale officielle.

VI. **Quels sont les aspects évalués :** L'évaluation touchera cinq facettes de l'aménagement : 1) la planification de l'aménagement; 2) le maintien d'une récolte durable sur le permis; 3) l'intégration des activités de récolte et de sylviculture; 4) l'aménagement de l'habitat faunique; 5) la protection de l'habitat du poisson.

1. PLANIFICATION DE L'AMÉNAGEMENT

Le titulaire de permis doit faire preuve d'une aptitude à :

i) incorporer les objectifs d'aménagement définis par le MRNE;
ii) mettre au point des stratégies d'aménagement éclairées;
iii) planifier la mise en œuvre de ces stratégies.

Le rendement du titulaire de permis par rapport à ces dimensions de l'aménagement forestier se manifeste en partie dans le plan d'aménagement lui-même.

Étant donné que le plan d'aménagement soutient toutes les activités d'aménagement forestier futures, il constitue une partie intégrante critique de l'aménagement et il mérite par conséquent d'être évalué. La préparation du plan d'aménagement sera assujettie à des normes minimales visant :

i) la qualité des données relatives aux ressources;
ii) les aspects de l'aménagement traités;
iii) la méthode d'analyse;
iv) le contenu et le style de présentation des composantes spatiale et non spatiale; et
v) le respect de tous les éléments du calendrier de soumission du plan.

On fixera ces normes à des niveaux suffisamment élevés pour que tout plan non spatial qui satisfait aux normes ou qui les dépasse au moment de la soumission initiale soit jugé acceptable par l'aménagiste régional des ressources et témoigne d'une planification de l'aménagement fructueuse.

On entend par *soumission initiale* le premier plan préliminaire non spatial proposé au MRNE qui détaille les stratégies qui seront mises en œuvre. Le MRNE évaluera cette proposition non spatiale et le nombre de modifications apportées à la suite de la soumission du plan n'auront pas d'effet sur le rendement du titulaire de permis en matière de planification à condition que le plan réponde initialement à toutes les normes minimales. Le titulaire de permis incorporera toutes les modifications recommandées dans le plan d'aménagement final qu'il soumettra.

L'aménagiste régional des ressources n'acceptera pas le plan s'il ne satisfait pas aux normes minimales fixées par rapport aux composantes spatiale ou non spatiale. Le cas échéant, le rendement du titulaire de permis en matière de planification de l'aménagement sera jugé insatisfaisant. Le titulaire de permis pourra alors faire appel en vue de l'obtention d'un deuxième avis auprès d'un comité mis sur pied par le Ministre et composé 1) d'un représentant d'une autre société titulaire de permis, 2) d'un représentant d'une autre région ministérielle et 3) d'un représentant de la Direction de l'aménagement des forêts ou de la Direction de la pêche sportive et la chasse (selon le sujet de préoccupation). Ce comité consultera le titulaire de permis concerné et le personnel du MRNE, il

comparera le plan aux normes minimales acceptables et il fera des recommandations au Ministre au sujet de l'acceptabilité du plan en question.
On élaborera les normes relatives à la préparation des plans d'aménagement avec la participation des titulaires de permis et du Ministère avant septembre 1994. Les titulaires disposeront ainsi de suffisamment de temps pour préparer les plans d'aménagement de 1997 de manière à satisfaire aux normes minimales.

2. MAINTIEN D'UNE RÉCOLTE DURABLE

L'activité d'aménagement des titulaires de permis doit maintenir une récolte durable à l'intérieur du permis à long et à court terme. Les principaux facteurs qui affectent la durabilité sont a) le calendrier de récolte, b) les travaux sylvicoles de base et c) les traitements correctifs à l'intérieur des peuplements aménagés. On évaluera l'activité des titulaires de permis par rapport à chacun de ces trois facteurs.

a) Calendrier de récolte

L'emplacement et le moment de l'exécution des récoltes dans le plan d'aménagement accepté ont été déterminés de manière à maximiser les niveaux de récolte durable tout en répondant à tous les autres objectifs d'aménagement. Le calendrier établi pour un permis est approuvé lorsqu'il s'avère satisfaisant sous le rapport de la durabilité de la récolte et de la répartition spatiale des classes d'âge.

À moins d'indications contraires, l'activité forestière sera jugée acceptable s'il y a mise en œuvre fructueuse du calendrier de récolte convenu. La mesure dans laquelle la programmation de la récolte est fructueuse correspond ainsi au pourcentage que représente le volume récolté au cours de 1993 à 1997 par rapport à la quantité initialement définie pour cette période. Lorsque les rapports de coupe sont soumis, on effectue un inventoriage du volume pour déterminer si le bois provient des quadrats dont la coupe était prévue au cours de la première période. La conformité entre la récolte prévue et la récolte réelle est fonction du rapport entre le volume de résineux coupés selon les prévisions établies pour la période I et les résineux totaux coupés au cours de la période.

L'ARR peut proposer des changements au plan initial au cours de la période pour un certain nombre de raisons, comme un morcellement avancé imprévu du peuplement. Si l'ARR l'autorise, on enregistrera le volume récolté comme s'il avait été prévu pour la période I, et cette récolte contribuera par conséquent à une programmation fructueuse.

La période visée par cette évaluation inclura les volumes récoltés en 1993-1994 jusqu'aux volumes récoltés en 1996-1997 inclusivement, en plus du volume de récolte envisagé en 1997-1998.

Les critères d'évaluation ne viseront pas les changements apportés au calendrier de récolte indépendamment de la volonté du titulaire de permis.

b) Travaux sylvicoles de base

On a conçu des programmes de sylviculture de base pour chaque permis afin que chaque hectare traité contribue soit à la possibilité de coupe à court terme, soit à l'expansion de la récolte durable à long terme. La réalisation d'une somme de travaux inférieure au programme de sylviculture de base à l'intérieur du permis aura nécessairement un effet négatif sur la durabilité de la récolte. On peut par conséquent évaluer directement l'activité en matière de sylviculture en évaluant le programme de sylviculture lui-même. La superficie totale sur laquelle le titulaire réalisera des travaux de plantation et d'éclaircie (cinq ans), comparativement à celle envisagée dans le plan d'aménagement approuvé, déterminera dans quelle mesure le titulaire satisfait aux exigences en matière de sylviculture.

La période visée par cette évaluation s'étendra de 1992-1993 à 1996-1997 inclusivement.

c) Traitements correctifs

Pour satisfaire aux attentes concernant l'approvisionnement en bois, les plantations et les peuplements soumis à des éclaircies précommerciales doivent se développer comme prévu et être prêts à être récoltés au moment désigné, en fournissant le volume désigné. Un rendement du peuplement inférieur aux attentes par rapport au volume au moment de la récolte compromettra la durabilité des approvisionnements futurs en bois.

Les normes de la cinquième année ont été établies pour différencier la densité et la densité relative des peuplements en vertu desquelles les attentes en fait de rendement seront ou ne seront pas atteintes. Une activité fructueuse en matière d'aménagement veillera à ce que tous les peuplements traités répondent à ces normes ou les dépassent. On peut recourir à des mesures correctives d'espacement ou de regarnissage pour réduire la densité et accroître la densité relative, respectivement, afin que tous les peuplements surpassent les normes minimales.

L'évaluation de l'activité du titulaire de permis à cet égard sera fonction des plantations désignées en tant que plantations nécessitant un traitement correctif et qui sont traitées de manière à surpasser les normes de la cinquième année. L'omission d'apporter des traitements correctifs dans les peuplements inférieurs aux normes réduira les rendements, ce qui compromettra les approvisionnements futurs en bois. L'omission de rectifier les situations inférieures aux normes est considérée comme un niveau d'aménagement inacceptable.

Les plantations nécessitant une éclaircie par espacement doivent avoir une hauteur suffisante pour rendre l'exécution du traitement pratique. Il faut effectuer l'espacement des plantations excessivement denses dès que le peuplement répond aux critères d'espacement définis dans le *Manuel d'exploitation forestière*. Lorsque la densité relative est inférieure aux normes et que la plantation constitue la mesure corrective indiquée, il faut effectuer le traitement pendant la période de cinq ans en cours. Si le secteur nécessitant des travaux de plantation ne peut pas être traité efficacement, le titulaire de permis peut établir une nouvelle plantation d'une superficie équivalente à ses propres frais.

Les plantations assujetties à ces critères d'évaluation sont celles établies pendant la période de 1986 à 1991 inclusivement, ainsi que les plantations de 1983, 1984 et 1985 sur lesquelles les traitements correctifs requis ont été retardés jusqu'au moment où le peuplement répondra aux critères d'espacement voulus.

3. PROTECTION DE LA RÉGÉNÉRATION NATURELLE

Le fait de protéger la régénération précoupée peut accroître la productivité d'un budget de sylviculture fixe en réduisant la création de secteurs de faible densité relative. On peut éviter les frais de sylviculture liés au reboisement de ces secteurs si les travaux de récolte ne réduisent pas substantiellement la densité relative de la zone de régénération précoupée.

La matrice de transition employée dans le plan de 1992 anticipe que, face à une combinaison donnée de travaux de récolte dans différents types de peuplements, une certaine partie de la superficie satisfera au seuil de résineux de 60 p. 100. La comparaison de ce résultat anticipé avec le résultat réel des inventaires de la cinquième année permet d'évaluer le degré auquel on atteint les objectifs de réponse de la régénération naturelle. Cette comparaison représente donc une évaluation de l'activité du titulaire de permis en matière de protection de la régénération naturelle.

On effectuera l'évaluation de ce critère au cours de la prochaine période de planification (1997-2001) une fois qu'on disposera des résultats des inventaires de la cinquième année des secteurs récoltés au cours de période actuelle.

4. AMÉNAGEMENT DE L'HABITAT FAUNIQUE

De nombreux facteurs influent sur la taille et la structure des populations fauniques; il revient au MRNE de déterminer leurs influences relatives et la mesure dans laquelle on peut parvenir à les contrôler. L'habitat constitue un facteur influençable et contrôlable dans le cas des majorités des espèces. Le MRNE a, en matière d'aménagement de l'habitat forestier, la responsabilité de fixer des objectifs quant à la population faunique forestière, d'établir les rapports fonctionnels décrivant l'influence des structures des peuplements et des forêts sur les populations, d'en dégager des objectifs d'aménagement de l'habitat et de surveiller les activités d'aménagement de celui-ci.

Les titulaires de permis doivent, dans le plan d'aménagement forestier qu'ils soumettent, démontrer qu'ils fourniront un habitat répondant aux définitions établies à l'échelle du peuplement et de la forêt pendant toute la durée de l'horizon de planification, à des niveaux équivalents ou supérieurs à ceux établis par le MRNE.

Le MRNE a délimité des unités d'aménagement d'aires d'hivernage du chevreuil (UAAHC) à l'intérieur de chaque permis. L'objectif d'aménagement établi pour chaque UAAHC vise à maximiser la superficie durable d'habitats hivernaux vitaux fournie aux cerfs de Virginie. Les plans d'aménagement forestier soumis en 1992 définissaient des stratégies pour l'aménagement de l'habitat à l'intérieur du territoire des UAAHC. Les titulaires de permis doivent soumettre des plans d'aménagement pour chacune des UAAHC à l'intérieur desquelles ils comptent récolter du bois au cours de la période I.

Le MRNE s'est fixé l'objectif de conserver un habitat forestier de conifères matures (HFCM) à l'intérieur de chaque permis. On considérera les HFCM comme un habitat localisé aux fins de l'évaluation de l'activité des titulaires de permis.

Étant donné que les erreurs dans les données des inventaires de développement forestier peuvent avoir une influence déterminante sur l'élaboration des plans visant des territoires restreints, le MRNE n'approuvera pas les plans d'aménagement des UAAHC et les travaux de récolte à l'intérieur des autres habitats fauniques localisés à moins que les titulaires de permis ne puissent démontrer que les données utilisées pour la préparation de ces plans sont de qualité satisfaisante. Le MRNE établira, en consultation avec les titulaires de permis et tel que précisé dans un document traitant des normes de planification de l'aménagement, des exigences minimales concernant les données utilisées. La responsabilité de la préparation des plans d'aménagement de l'habitat revient aux titulaires de permis; cependant, le MRNE, reconnaissant la nouveauté de cette activité, fournira son aide dans le processus dans la mesure où le lui permettront ses ressources.

L'emplacement, le moment d'exécution et le type des travaux de récolte effectués dans les habitats fauniques localisés et dans la forêt en général qui sont précisés dans les plans d'aménagement acceptés ont été déterminés en vue de créer une répartition particulière des types de peuplements et des classes d'âge. Le programme de récolte établi a été approuvé en partie parce qu'il atteignait de manière satisfaisante les objectifs relatifs à l'habitat faunique. L'activité forestière sera jugée fructueuse du point de vue de la fourniture d'un habitat si le titulaire met fructueusement en œuvre le calendrier de récolte convenu. On s'attend cependant à ce que les titulaires de permis décèlent les erreurs de planification dues à un inventoriage inadéquat et qu'ils proposent des rajustements aux travaux prévus dans leur plan d'aménagement forestier ou leur plan d'aménagement d'UAAHC afin d'atteindre le but de l'intervention en matière d'aménagement exposé dans leur plan.

On considérera comme une infraction le fait 1) qu'une pénalité soit imposée pour une récolte illégale dans une UAAHC, un HFCM ou un autre habitat faunique localisé, ou

2) qu'une pénalité soit imposée au titulaire qui n'observera pas les prescriptions de récolte approuvées à l'intérieur d'un habitat localisé. Si on relève des infractions dans plus de 5 p. 100 des quadrats associés à un habitat localisé ou si un titulaire ne soumet pas et ne met pas en œuvre de plan d'aménagement d'UAAHC pour l'aménagement d'au moins 75 p. 100 de la superficie des UAAHC au cours de la période I du plan d'aménagement forestier, l'activité du titulaire de permis sera jugée insatisfaisante.

5. PROTECTION DE L'HABITAT DU POISSON

Il est extrêmement difficile de réparer les dommages causés à l'habitat du poisson une fois ceux-ci survenus.

Les titulaires de permis doivent être en mesure de déceler les besoins de protection de l'habitat du poisson, de planifier les mesures de protection indiquées et de mettre efficacement en œuvre ces mesures. Les titulaires de permis doivent se conformer à la *Loi sur l'assainissement de l'environnement* et la *Loi sur l'assainissement de l'eau*, ainsi qu'aux règlements pertinents, en plus d'adhérer aux exigences stipulées dans le *Manuel d'exploitation forestière*.

Des exigences particulières ont été établies par rapport aux passages de cours d'eau.

Des amendes automatiques seront imposées en cas de non-respect des critères d'évaluation. Les titulaires de permis devront de plus remettre les lieux en état dans la mesure du possible.

On inspectera tous les passages de cours d'eau et toutes les zones tampons pour déterminer si le titulaire s'est conformé à la *Loi sur l'assainissement de l'environnement* et à la *Loi sur l'assainissement de l'eau* ainsi qu'aux règlements pertinents, et s'il respecte les exigences stipulées dans le *Manuel d'exploitation forestière*.

Les amendes représenteront le seul critère qu'on utilisera pour juger l'activité des titulaires de permis en ce qui concerne la protection de l'habitat du poisson. L'absence d'amende dans 95 p. 100 des cas du nombre total de passages de cours d'eau constituera un rendement acceptable.

La période visée par cette évaluation comprendra les années 1992-1993 à 1996-1997.

Lorsque les titulaires de sous-permis effectueront leurs propres travaux sous la surveillance du MRNE, ils n'assumeront pas la responsabilité des infractions ou des travaux de remise en état relatifs aux passages de cours d'eau ou à la protection de l'habitat du poisson.

LISTE DES INFRACTIONS POSSIBLES FACE AUX CRITÈRES VISANT LA PROTECTION DE L'HABITAT DU POISSON

Infraction

1. Circulation non autorisée de véhicules ou de matériel à l'intérieur d'un cours d'eau en vue de l'installation de passages de cours d'eau.

2. Travaux de terrassement le long du cours d'eau en amont ou en aval du passage du cours d'eau, ou creusage excessif de canaux ou de tranchées.

3. Défrichage de la végétation au sol à moins de 30 mètres du passage du cours d'eau.

4. Omission de respecter la taille des ponceaux ou des ponts autorisés.

5. Installation illégale d'un passage de cours d'eau.

SEUILS D'ACTIVITÉ

Le tableau 1 fait état des seuils d'activité escomptés par rapport à chaque élément des critères d'évaluation. Il suffit de respecter tous les seuils établis pour qu'on recommande le renouvellement du permis, tandis que le non-respect de l'un ou l'autre des aspects visés suffit pour qu'on recommande un non-renouvellement.

Tableau 1

ASPECT	ÉVALUATION	SEUIL
Planification de l'aménagement	Méthode de construction, contenu et moment de soumission des renseignements.	Acceptation du plan initial par l'ARR.
Travaux sylvicoles de base	Superficie de plantation réelle par opposition à la superficie prévue. Superficie réelle soumise à des éclaircies par espacement par opposition à la superficie prévue.	95 %
Programmation de la récolte	Volume coupé dans les quadrats prévus au cours de la période I divisé par le volume total de bois coupé au cours de la période.	95 %
Traitements correctifs	Pourcentage de la superficie traitée à l'intérieur des plantations désignées aux fins de la modification de la densité ou de la densité relative.	95 %
Récolte / sylviculture	Proportion réelle de terrains déboisés satisfaisant au niveau de densité relative de 60 % par opposition à la proportion prévue.	90 %
Passages de cours d'eau	Pourcentage de passages de cours d'eau acceptables par rapport au nombre total de passages.	95 %
Habitat faunique	Proportion de quadrats situés à l'intérieur ou directement à côté d'habitats localisés n'ayant donné lieu à aucune pénalité pour la récolte de bois sans autorisation à l'intérieur du secteur de l'habitat localisé.	95 %
	Proportion de quadrats déboisés à l'intérieur des habitats localisés n'ayant donné lieu à aucune pénalité pour le non-respect de prescriptions approuvées.	95 %
	Proportion d'UAAHC dont l'aménagement était prévu pendant la période I pour lesquelles des plans d'aménagement d'UAAHC ont été soumis et mis en œuvre au cours de la période I.	75 %

MÉTHODES D'ÉVALUATION ASSOCIÉES AUX CRITÈRES D'ÉVALUATION DE L'ACTIVITÉ DES TITULAIRES DE PERMIS

Aspect : Planification de l'aménagement

On évaluera le plan d'aménagement initial soumis par le titulaire de permis en fonction des normes minimales établies quant au plan d'aménagement. Le titulaire de permis pourra demander une deuxième opinion si le plan initial n'est pas accepté par un ARR dans le cadre des modalités décrites dans les critères d'évaluation.

Aspect : Programmation de la récolte

La méthode employée pour évaluer ou déterminer cet aspect sera basée sur la récolte d'un plein quadrat. Le seul bois considéré comme bois récolté en dehors de la " période I " sera le volume de bois récolté à l'intérieur des quadrats de coupe proposés par le titulaire de permis pour la période II ou des périodes ultérieures, pour des raisons à propos desquelles le titulaire de permis et l'ARR se seront mutuellement entendus.

La détermination du seuil acceptable ne sera pas basée sur une comparaison de la forme du quadrat (définie dans le plan d'exploitation) avec la configuration réelle du quadrat décrite dans le rapport annuel. Les récoltes illégales survenant au cours de la saison d'exploitation seront traitées de la manière normale, c.-à-d. par l'imposition de pénalités ou de la cessation des travaux de coupe.

Aspect : Travaux sylvicoles de base

On comparera la somme de travaux sylvicoles de base réalisés selon les normes et remboursés par le MRNE au cours de la période de 1992 à 1996 avec la quantité de travaux sylvicoles de base définis dans le plan d'aménagement approuvé.

Aspect : Traitements correctifs

Proportion des plantations définies comme plantations nécessitant des traitements correctifs par le MRNE (en fonction des critères de rendement des plantations établis) et qu'on traite afin qu'elles satisfassent aux normes de la cinquième année ou qu'elle les dépassent. Lorsque le peuplement est excessivement dense, le titulaire de permis peut retarder le traitement jusqu'à ce que la plantation satisfasse aux critères d'espacement définis dans le *Manuel d'exploitation forestière*.

Aspect : Intégration de la sylviculture et de la récolte

On évaluera cet aspect en comparant les niveaux de régénération employés dans les matrices de transition du plan d'aménagement avec les niveaux de régénération réels relevés lors des inventaires de la cinquième année.

Aspect : Aménagement de l'habitat faunique

Les habitats fauniques localisés comprennent les unités d'aménagement d'aires d'hivernage du chevreuil (UAAHC), les habitats forestiers de conifères matures

(HFCM), les zones tampons le long des cours d'eau et des tourbières pour lesquels on s'est fixé un objectif de nature faunique, les corridors de déplacement de la faune et tous les habitats particuliers relevés par les biologistes régionaux dans le plan d'exploitation ou le plan d'aménagement.

On évaluera l'activité des titulaires de permis à cet égard en évaluant 1) la mesure dans laquelle les titulaires de permis effectuent des travaux acceptables à l'intérieur et à proximité des habitats fauniques localisés désignés, et 2) les efforts des titulaires de permis à élaborer et mettre en œuvre des plans d'aménagement visant les UAAHC prévues au titre des activités d'aménagement de la période I dans le plan d'aménagement forestier approuvé. On considérera comme un niveau inacceptable d'activité une infraction liée 1a) à des travaux de récolte effectués sans autorisation à l'intérieur d'un habitat faunique localisé dans plus de 5 p. 100 des quadrats de coupe renfermant un habitat faunique localisé ou voisins d'un tel habitat, 1b) au non-respect des prescriptions de récolte approuvées dans plus de 5 p. 100 des quadrats situés à l'intérieur des habitats fauniques localisés, ou 2) l'omission d'élaborer et de mettre en œuvre des plans d'aménagement d'UAAHC visant 75 p. 100 ou plus de la superficie des UAAHC prévus pour la période I du plan d'aménagement approuvé. Le nombre de quadrats de coupe à partir duquel on établira le niveau d'activité acceptable de 5 p. 100 équivaudra à tous les blocs ayant fait l'objet de travaux de récolte entre 1992-1993 et 1996-1997. On évaluera la mise en œuvre des plans d'aménagement des UAAHC d'une manière similaire au mode d'évaluation des forêts qui ne sont assujetties à aucune contrainte du point de vue de la récolte, des traitements sylvicoles correctifs et de la protection de la régénération naturelle, mis à part l'exception suivante : pour ce qui est de l'évaluation de la mise en œuvre du calendrier de récolte autorisé, la superficie (hectares) traitée de la manière (p. ex. coupe à blanc, deux interventions, etc.) approuvée dans le plan d'aménagement correspondra au niveau de succès, plutôt qu'au calcul du volume récolté (m^3). Les seuils établis quant aux UAAHC seront identiques à ceux établis dans le cas des forêts qui ne sont assujetties à aucune restriction.

Dans certains cas, on se retrouvera face à des " zones grises " penchant d'un côté ou d'un autre. On évaluera ces cas en faisant appel à son jugement, de la même manière que lorsqu'on met présentement en application les règlements visant la pêche sportive, la chasse et l'exploitation forestière.

PROGRAMME DE PLANIFICATION DE L'AMÉNAGEMENT DE 1997

ÉLABORATION PAR LE MRNE DES OBJECTIFS DES PLANS D'AMÉNAGEMENT DE 1997 AVEC LA PARTICIPATION DU PUBLIC.

LE 30 SEPTEMBRE 1994 : ÉTABLISSEMENT DES NORMES MINIMALES DES PLANS D'AMÉNAGEMENT.

LE 31 DÉCEMBRE 1994 : DERNIÈRE DATE D'INCLUSION DE NOUVEAUX OBJECTIFS.

FOURNITURE DES DONNÉES AUX TITULAIRES DE PERMIS PAR LE MRNE.
Le 31 mars 1995

ÉLABORATION DES PROPOSITIONS NON SPATIALES PAR LES TITULAIRES DE PERMIS.
Le 30 novembre l995

APPROBATION DES PROPOSITIONS NON SPATIALES PAR LE MRNE.
Le 30 avril 1996

ÉLABORATION DES PLANS RELATIFS AUX QUADRATS PAR LES TITULAIRES DE PERMIS.
Le 31 juillet 1996

EXAMEN DES PLANS RELATIFS AUX QUADRATS PAR LES RÉGIONS DU MRNE.
Le 31 décembre 1996

ÉVALUATION DE L'ACTIVITÉ DES TITULAIRES DE PERMIS PAR LE MRNE.
Le 31 mars 1997

ÉLABORATION DES PLANS D'EXPLOITATION DE 1997.
Le 31 mars 1997

DÉFINITION DES ALLOCATIONS DE 1997 À 2002.
Le 31 mars 1997

LE 1ER AVRIL 1997 : DÉBUT DE LA PREMIÈRE ANNÉE DE FONCTIONNEMENT DU PLAN D'AMÉNAGEMENT DE 1997.

TABLE 2
SUMMARY OF PERFORMANCE OF CROWN TIMBER LICENSEES FOR PERIOD 1992-1997

Components of the Evaluation Criteria	Performance Measurement	Acceptable Threshold	Licensee Performance Levels (Percent)									
			1	2	3	4	5	6	7	8	9	10
Management Planning	Standards for Forest Management plans relating to method of construction, content and timing of information.	Acceptance by RRM of initial plan	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Harvest Schedule	% of total softwood volume harvested which was sourced from Period I harvest blocks of the Management Plan.	95%	100	100	100	100	100	100	100	100	100	100
Basic Silviculture	% of basic silviculture requirement which was completed to acceptable standards.	95%	99	102	*** 97		172	165	151	133	111	***** 97
Remedial Treatments	% of area of 1983-1990 plantations designated for stocking and/or density modification which have been treated to acceptable standards.	95%	38	1	34	8	**** 0	37	4	100	100	9
Watercourse Crossings	% of watercourse crossings which have been installed to acceptable standards.	95%	98	95	97	99	96	99	96	98	96	98
Wildlife Habitat	1. % of harvest blocks in or adjacent to site specific wildlife habitat for which penalties were not incurred for harvesting without approval.	95%	98	100	100	100	100	100	99	100	98	99
	2. % of harvest blocks in site specific wildlife habitat which achieved harvest prescriptions.	95%	94	*	100	100	*	100	99	100	96	96
	3. % of the DWAMU area identified for Period I for which Management Plans were submitted and implemented.	75%	141	**	104	98	**	29	38	100	100	23

* Harvest prescriptions for site specific wildlife habitat were not developed.
** The DWAMU landbase was not modelled for habitat intervention.
*** The basic silviculture achievement is averaged across the two Repap licenses due to a shortfall of eligible treatment areas on license number 4.
**** Current licensee; Eagle Forest Products, assumed management responsibility in latter half of period
***** The area of basic silviculture treated on the Restigouche-Tobique license includes 722 ha completed by the Region under job creation projects.

Licenses

1. Upsalquitch – Avenor Maritimes Inc.
2. Nepisiguit – Stone Container (Canada) Inc.
3. Lower Miramichi – Repap New Brunswick
4. Upper Miramichi – Repap New Brunswick
5. Kent – Eagle Forest Products Ltd.
6. Queens-Charlotte – J. D. Irving Ltd.
7. Fundy – J. D. Irving Ltd.
8. York – St. Anne-Nackawic Pulp Company Ltd.
9. Carleton – Juniper Lumber Co. Ltd.
10. Restigouche-Tobique – Fraser Papers Inc.

February 25, 1998

STANDARDS FOR ACCEPTANCE OF MANAGEMENT PLANS

LICENSE: 1 (AVENOR)

The forest management planning process is comprised of two phases:

1) the evaluation of management alternatives for the purpose of selecting an appropriate strategy; and,
2) geographic layout of that strategy for the purpose of implementation.

Both phases must be satisfactorily performed for the Licensees' plan to be deemed acceptable.

Phase 1 of the planning effort will be deemed acceptable if all the following steps are performed[1].

1. The Licensee provides the following resource information:	Yes	No
a. Permanent sample plot data	X	O
b. 5th year survey data	X	O
c. Annual reports	X	O
d. Pre-82 survey data	X	O
e. Maps of operationally inaccessible areas	X	O

Comments:

1.e needs to be revisited for the 2002 plan

2. Stand level forecasts are made using DNRE approved models for the following stand conditions:		
a. Managed	X	O
b. Natural cutovers	X	O
c. Even-aged merchantable (clearcut and 2-pass)	X	O
d. Uneven-aged suitable for selection harvest (hardwood and softwood types)	X	O
e. Pre/post cut transition	X	O

[1] For details on the criteria listed here, refer to the document entitled "A vision for New Brunswick Forests, Goals and Objectives for Crown Land Management, 1994".

LICENSE: 1 (AVENOR)

Comments:

3. Stand development is characterized by the following parameters:

	Yes	No
a. Volume by species	X	O
b. Mean piece-size	X	O
c. Log content to 15 cm top	X	O
d. Percent softwood by volume	X	O
e. Limits to operability	X	O
f. Time frame of suitability for deer winter cover	X	O
g. Time frame of suitability as mature softwood habitat	X	O

Comments:

4. Each stand on the License is characterized for the following conditions:

(i) Biological:

a. Species composition	X	O
b. Growth rate	X	O
c. Site quality	X	O
d. Harvest transition	X	O
e. Suitability for 2 pass even-aged	X	O

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	Yes	No
f. Suitability for uneven aged cutting cycle (**treatment-response file, not in XPAT file**)	X	O
g. Suitability for silviculture (i.e., planting, spacing and commercial thinning) (**treatment-response file**)	X	O
(ii) Physical:		
a. Operationally inaccessible (**class files & XPAT file**)	X	O
b. Riparian buffer (**class files & XPAT file**)	X	O
c. Legal Reserve (**class files & XPAT file**)	X	O
d. Deer Wintering Area Management Units (**class files & XPAT file**)	X	O

Comments:

4 (ii) a needs to be revisited for the 2002 plan

4 (ii) b, c & d are established & provided to the Licensee by DNRE

5. A computer readable file of the classification results determined in Item 4 above is supplied to the Department. X O

Comments:

Stand file is: XPAT97.DBF April 22, 97 34 Mb (latest version provided by Avenor)

Class files, Curve files and TRF provided with the December 96 final version of the spatial plan

6. DNRE approved forest level models are employed to analyse even and uneven aged management for the stand types determined in Item 4 above. X O

LICENSE: 1 (AVENOR)

Comments:

FORMAN +1 used as the simulation tool

7. Forest level analyses are performed which explicitly include the following biologically feasible range of inputs:

	Yes	No
(i) Silviculture		
a. Planting - amount, priority criteria, and species (TRF)	X	O
b. Spacing - amount and priority criteria (TRF)	X	O
c. Commercial thinning - amount and priority criteria (TRF)	X	O
(ii) Harvest		
a. Clear-cut - amount and priority criteria (TRF)	X	O
b. 2-pass partial cut - amount, priority criteria and type(TRF)	X	O
c. Selection (uneven-aged) - amount, priority criteria and type (TRF)	X	O

Comments:

8. Forest level results for each combination of inputs listed in Item 7 above are expressed by period for each of the following indicators:

	Yes	No
(i) Timber		
a. Sustainable fibre supply and volume by source and harvest method	X	O

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	Yes	No
b. Log supply for current specifications	X	O
c. Mean tree size profile	X	O
d. Fallout species profile	X	O
e. Silviculture costs	N/A O	O

(ii) Mature Coniferous Forest Habitat

	Yes	No
a. Net MCFH Objective identified	X	O
b. Net MCFH Objective met for periods 1 through 7	X	O
c. MCFH Blocks meet composition and spatial criteria	X	O
d. MCFH/DWA overlap factored into block projections (if overlap is significant)	X	O
e. MCFH Block summary sheets provide information as in "Mock Plan" appendix 7	X	O
f. Period 1 timber harvest estimates provided	X	O
g. MCFH Block stand-level class files provided	X	O
h. MCFH Block stand files provided	O	X
i. MCFH Blocks delinated on management plan map	X	O
j. Gross MCFH Objective calculated	X	O
k. Gross MCFH Objective met for periods 8 through 16	X	O
l. MCFH management proposal accepted	X	O

Comments:

8 (ii) b, c& d some compromise was made in approving spatial criteria for some MCFH blocks. When DWA overlap analysis is made, a couple of MCFH no longer meet composition criteria in Period 7 if area is managed for DCWH. These issues need to be addressed for the 2002 plan.

8 (ii) h not provided.

8 (ii) k reported Gross MCFH levels are not the same on page 34 V.S. page 35 .

(iii) Deer Wintering Areas

	Yes	No
a. Group 1 DWA management summarized (i.e. 1993-97 DWA Mgmt Plans).	x	o
b. Group 2 DWA management scenarios (1997+) presented	x	o
c. Period 1 DWA area identified (i.e. for P1 DWA Mgmt Plan development).	x	o
d. Period 1 timber harvest estimates provided.	x	o
e. FORMAN files and environments provided.	x	o
f. DWA boundaries delineated on management plan maps.	x	o
g. DCWH supply and management proposal accepted.	x	o

Comments:

8 (iii) g only one of 4 Group 1 DWA has recently been revised for the 1997 plan and was submitted. Approval has not yet been granted. Other 3 Group 1 DWA not yet revised by Avenor. Other (6) proposed Period 1 DWA not yet submitted. Proposed level in the spatial plan conditionally accepted until individual plans are submitted.

(iv) Watercourse Buffer Zones

	Yes	No
a. Buffer widths by feature presented.	x	o
b. Potential for timber harvest investigated	x	o
c. Buffer harvest prescriptions described	x	o
d. Period 1 timber harvest estimates provided	x	o
e. Buffer management proposal accepted	x	o

9. The Licensee's first non-spatial submission of the management plan met minimum standards as defined in the document entitled "A vision for New Brunswick Forests Goals and Objectives for Crown Land Management" (1994) .. .. x o

Comments:

The first submission met most of the minimum standards although at the time of the submission (September 22, 1995) the public input requirement was not met and some tables required in the management plan format were not initially provided.

LICENSE: 1 (AVENOR)

Phase 2. The geographic lay-out for strategy implementation, will be deemed acceptable if Licensee:

1. Lays out and characterizes the harvest schedule for a minimum of 25 years (or until such time as the point of minimum softwood growing stock is reached up to a maximum of 35 years), describing the harvest schedule as follows:

	Yes	No
(i) Harvest Block File:		
a. Region	x	o
b. License	x	o
c. Block #	x	o
d. Map #	x	o
e. Area (ha)	x	o
f. Type of harvest	x	o
g. Deer Wintering Area Management Unit Number	x	o
h. Supply run (SW or HW)	x	o
i. Harvest volume of species group (by period)	x	o
j. List of adjacent block numbers	N/A o	o
(ii) Harvest Stand File:		
a. Map #	x	o
b. Stand #	x	o
c. Block #	x	o
d. Area in block	x	o
e. Harvest volume by species group (by period)	x	o

Comments:

_____

_____

_____

_____

LICENSE: 1 (AVENOR)

		Yes	No
2.	Identifies spacing and commercial thinning areas for the first 5 years	O	X

Comments:

Spacing not blocked: will be identified at the Operating plan level

Commercial Thinning not scheduled for Period 1 !

3.	Sequences blocks for harvest based on the following criteria:		
	a. A minimum harvest delay of 2 periods between adjacent harvest blocks which comprise a total area exceeding a maximum opening of 100 ha	X	O
	b. The distribution of harvest types by period approved in Phase 1 of the management plan	X	O

Comments:

4.	Describes the impact of the mapped strategy for all indicators listed in Phase 1, ...	Item 8 above X	O

Comments:

Discussion section, pp 68-71 of Spatial plan.

Execution of the two phases of the management planning process must be performed in sequence and evaluation of both steps will be made upon submission of each phase as they are completed. The management alternatives (Phase 1) will be submitted and an appropriate strategy selected prior to proceeding with geographic layout (Phase 2). If both phases are accepted, the Licensee management planning performance will be acceptable in the context of the Performance Evaluation criteria.

LICENSE: Upsalquitch - Avenor

HARVEST SCHEDULE
(volumes in m^3)

Year		Softwood* Volume Harvested From Period 1 Blocks		Total Softwood* Volume Harvested
1993-94		394,041		394,041
1994-95		361,293		361,293
1995-96		345,628		345,628
1996-97		325,371		325,371
1997-98 **		387,300		387,300
TOTAL	a)	1,813,633	b)	1,813,633

Performance Measure = a ÷ b x 100 = 100 %

* Spruce, Fir, Jack Pine
** Proposed in 1997-98 Operating Plan

Regional Comments:

The Licensee experienced difficulty in administering allocations to Sub-Licenses early in the period, however, allocations were managed very well during the balance of the period. The softwood volume harvested for the total forest compared to the allocation for the Five Year Period was 100.7%. ***

*** Period 1992 – 1996. Volume harvested was 1,930,703 m^3 and allocation was 1,916,740 m^3.

LICENSE: Upsalquitch – Avenor

BASIC SILVICULTURE
(areas in hectares) (All Swd)

Year	Area Treated to Standard					Basic Requirement
	Planting	Spacing	Expanded Spacing		Total	
1992-93	1,566.5	300.1			1,866.6	1,865
1993-94	744.2	286.4			1,030.6	1,140*
1994-95	487.5	385.9			873.4	1,140
1995-96	491.2	269.0	603.3		1,363.5	1,140
1996-97	78.4	325.6	825.2		1,229.2	1,140
TOTAL				a)	6,363.3	b) 6,425

Silviculture Effort = a ÷ b x 100 = 99.0 %

Regional Comments:

In 1994, 1995 and 1996, Avenor (NBIP) expressed several times per year concerns about not achieving the planting quota because most cut blocks were stocked. The company proposed on numerous occasions a modification of the upper stocking limit to allow additional planting and a minor modification was allowed. We assured the Licensee that unattained planting levels were acceptable due to an absence of sites. In 1995 expanded silviculture started and with a combined basic spacing (BT) and expanded (XT) thinning of softwoods, the 95% requirement was satisfied while available planting sites decreased.

Hwd thinning 1995 = 1,126.3 ha DWAMU Planting = 172.6 ha DWAMU Thinning = 354.1 ha
Hwd thinning 1996 = 1,132.2 ha Total Planting (Non Basic) = 580.5 ha Other Thinning = 202.7 ha
Cleaning = 106.0 ha Total Silviculture = 10,037.7 ha

*Basic Requirement includes 840 ha of planting (40 ha of other species) and 300 ha of thinning from the Management Plan.

LICENSE: Upsalquitch - Avenor

REMEDIAL TREATMENT OF PLANTATIONS
(areas in hectares)

Year of Establishment	Area Requiring Treatment	Treatable* Area	Actual Area Treated To Standard
1983			
1984			
1985	304.0	304.0	421.1
1986	338.0	231.4	133.0
1987	404.0	216.7	-
1988	788.0	409.4	-
1989	438.0	157.7	-
1990	368.0	132.5	-
TOTAL		a) 1,451.7	b) 554.1

Performance Measure = b ÷ a x 100 = 38.2 %

* Area determined suitable for treatment prior to March 31, 1997.

Regional Comments:

The Licensee has made a minimal effort with regards to remedial treatment during the period. Most understocked conditions have been addressed, however, high density in plantations must be looked at. It should be noted that areas requiring a C (check) were not evaluated by the department for both stocking and density. The issues of overtopping hardwood, overdensity due to hardwood and softwood density must be discussed with the Licensee.

LICENSE: Upsalquitch - Avenor

FISH HABITAT PROTECTION

Year	Number of Watercourse Crossings Installed*	Number of Watercourse Crossings Where Monetary Penalties Were Incurred
1992-93	46	-
1993-94	75	-
1994-95**	101	3
1995-96	107	3
1996-97	155	5
TOTAL	a) 484	b) 11

Performance Measure = (1-(b ÷ a)) x 100 = 97.7 %

* Applies to all natural watercourses
** Includes from 1994 to March 31/97 all watercourse crossings installed by Sub-licensees that were under the supervision of the Licensee during the period.

Regional Comments:

The licensee made in excess of 95% in each year, 100% in two years and therefore is to be commended. Performance can be improved by using only crews specializing in stream crossing installations. This recommendation was strongly made at the last annual review with the licensee.

LICENSE: Upsalquitch - Avenor

WILDLIFE HABITAT MANAGEMENT

1. Component: Harvesting Without Approval

Year	Number of Blocks In Or Directly Adjacent To *Site-Specific Wildlife Habitats	Number of Blocks In Or Directly Adjacent To Site Specific Habitats In Which Penalties Were Applied For Harvesting Without Approval In The Site Specific Habitat
1992-93	97	-
1993-94	115	5
1994-95	100	1
1995-96	134	-
1996-97	85	3
TOTAL	a) 531	b) 9

Performance Measure = (1-(b ÷ a)) x 100 = 98.3 %

Note: * As defined on page 14 of the Licensee Performance Evaluation document (July 1993)

Regional Comments:

The mark of 98.3% indicates excellent performance especially when considering that it involved 531 blocks – a large nunber. The licensee made > 99% on greater than 300 of those blocks and in no year did it make less than 96.5%.

LICENSE: Upsalquitch - Avenor

WILDLIFE HABITAT MANAGEMENT

2. Component: Not Following Approved Harvest Prescription

Year	Number of Blocks In Site-Specific Wildlife Habitats	Number of Blocks In Site-Specific Habitats Which Penalties Were Applied For Not Following Prescription
1992-93	30	0
1993-94	32	0
1994-95	36	1
1995-96	62	2
1996-97	34	8
TOTAL	a) 194	b) 11

Performance Measure = (1-(b ÷ a)) x 100 = 94.3 %

Regional Comments:

Avenor has put in considerable time and effort into preparing DWAMU Management Plans and subsequent Operating Plan prescriptions. There have been problems at the Operating Plan level with regards to prescriptions not being followed by operators (see Annual Review Comments).

LICENSE: Upsalquitch - Avenor

WILDLIFE HABITAT MANAGEMENT

3. Component: Submission and Implementation of DWAMU Management Plans for Period I

Year	Area of DWAMU Management Identified for Period I (92-97)	Area of DWAMU For Which Management Plans Were Submitted And Implemented In Period I (92-97)
1992-97		
TOTAL	a) 13,289 ha	b) 18,686

Performance Measure = (1-(b ÷ a)) x 100 = 141 %

Regional Comments:

Two (2) plans were proposed, however, 4 plans were implemented in part.

STANDARDS FOR ACCEPTANCE OF MANAGEMENT PLANS

LICENSE: 2 (SCCI)

The forest management planning process is comprised of two phases:

1) the evaluation of management alternatives for the purpose of selecting an appropriate strategy; and,

2) geographic layout of that strategy for the purpose of implementation.

Both phases must be satisfactorily performed for the Licensees' plan to be deemed acceptable.

Phase 1 of the planning effort will be deemed acceptable if all the following steps are performed[1].

1. The Licensee provides the following resource information:	Yes	No
a. Pemanent sample plot data	X	O
b. 5th year survey data	X	O
c. Annual reports	X	O
d. Pre-82 survey data	X	O
e. Maps of operationally inaccessible areas	X	O

Comments:

1.e needs to be revised for the 2002 plan

2. Stand level forecasts are made using DNRE approved models for the following stand conditions:		
a. Managed	X	O
b. Natural cutovers	X	O
c. Even-aged merchantable (clearcut and 2-pass)	X	O
d. Uneven-aged suitable for selection harvest (hardwood and softwood types)	X	O
e. Pre/post cut transition	X	O

[1] For details on the criteria listed here, refer to the document entitled "A vision for New Brunswick Forests, Goals and Objectives for Crown Land Management, 1994"

LICENSE: 2 (SCCI)

Comments:

Stand level forcasts for uneven-aged tolerant hardwood (TH) management employed in the 1992 plan were reused.

3. Stand development is characterized by the following parameters:

	Yes	No
a. Volume by species	X	O
b. Mean piece-size	X	O
c. Log content to 15 cm top	X	O
d. Percent softwood by volume	X	O
e. Limits to operability	X	O
f. Time frame of suitability for deer winter cover	X	O
g. Time frame of suitability as mature softwood habitat	X	O

Comments:

4. Each stand on the License is characterized for the following conditions:

(i) Biological:

a. Species composition	X	O
b. Growth rate	X	O
c. Site quality	X	O
d. Harvest transition	X	O
e. Suitability for 2 pass even-aged	X	O

LICENSE: 2 (SCCI)

	Yes	No
f. Suitability for uneven aged cutting cycle	X	O
g. Suitability for silviculture (i.e., planting, spacing and commercial thinning)	X	O
(ii) Physical:		
a. Operationally inaccessible	X	O
b. Riparian buffer	X	O
c. Legal Reserve	X	O
d. Deer Wintering Area Management Units	X	O

Comments:

4 (i) f) Treatment is explored in plan (see Appendix XIV) and will be done at operating plan level. Uneven-aged harvest was considerd only in TH stands with suitable conditions for the treatment.

4 (ii) a) needs to be revised for the 2002 plan.

4 (ii) b, c,& d) are established & provided to the Licensee by DNRE

5. A computer readable file of the classification results determined in Item 4 above is supplied to the Department. X O

Comments:

6. DNRE approved forest level models are employed to analyse even and uneven aged management for the stand types determined in Item 4 above. (see comment) O O

LICENSE: 2 (SCCI)

Comments:

Forest level model used for even-aged management only. Uneven-aged TH management was analysed in the 1992 plan without using DNRE approved forest level models and the same results were presented in the 1997 plan

7. Forest level analyses are performed which explicitly include the following biologically feasible range of inputs:

(i) Silviculture	Yes	No
a. Planting - amount, priority criteria, and species	X	O
b. Spacing - amount and priority criteria	X	O
c. Commercial thinning - amount and priority criteria	X	O
(ii) Harvest		
a. Clear-cut - amount and priority criteria	X	O
b. 2-pass partial cut - amount, priority criteria and type	X	O
c. Selection (uneven-aged) - amount, priority criteria and type	O	X

Comments:

7 (ii) c) see comment in 6 above.

8. Forest level results for each combination of inputs listed in Item 7 above are expressed by period for each of the following indicators:

	Yes	No
(i) Timber		
a. Sustainable fibre supply and volume by source and harvest method	X	O

LICENSE: 2 (SCCI)

		Yes	No
b.	Log supply for current specifications	X	O
c.	Mean tree size profile	X	O
d.	Fallout species profile	X	O
e.	Silviculture costs	N/A O	O

(ii) Mature Coniferous Forest Habitat

		Yes	No
a.	Net MCFH Objective identified	X	O
b.	Net MCFH Objective met for periods 1 through 7	X	O
c.	MCFH Blocks meet composition and spatial criteria	X	O
d.	MCFH/DWA overlap factored into block projections (if overlap is significant)	O	X
e.	MCFH Block summary sheets provide information as in "Mock Plan" appendix 7	X	O
f.	Period 1 timber harvest estimates provided	X	O
g.	MCFH Block stand-level class files provided	X	O
h.	MCFH Block stand files provided	O	X
i.	MCFH Blocks delinated on management plan map	X	O
j.	Gross MCFH Objective calculated	X	O
k.	Gross MCFH Objective met for periods 8 through 16	X	O
l.	MCFH management proposal accepted	X	O

Comments:

8 (ii) c a few modified or new MCFH have not been ground surveyed.

8 (ii) d overlap analysis recommended in April 4, 97 Specific Comments to SCCI

8 (ii) f no intervention proposed within MCFH blocks.

8 (ii) g stand number & map number not provided in these Class files. New or modified MCFH blocks should have been named PM*.TXT (not MC*.TXT).

8 (ii) h not provided.

(iii) Deer Wintering Areas	Yes	No
a. Group 1 DWA management summarized (i.e. 1993-97 DWA Mgmt Plans). . . N/A	o	o
b. Group 2 DWA management scenarios (1997+) presented	x	o
c. Period 1 DWA area identified (i.e. for P1 DWA Mgmt Plan development).	x	o
d. Period 1 timber harvest estimates provided.	x	o
e. FORMAN files and environments provided.	x	o
f. DWA boundaries delineated on management plan maps.	x	o
g. DCWH supply and management proposal accepted.	x	o

Comments:

8 (iii) a no plan approved during 1993-97, i.e. none to carry forward as "Group 1 DWA"

8 (iii) b called "Group 1 DWA" in SCCI plan

8 (iii) g no individual DWA plan submitted yet. Spatial plan proposed treatment levels have been approved only as an estimate figure.

(iv) Watercourse Buffer Zones	Yes	No
a. Buffer widths by feature presented.	x	o
b. Potential for timber harvest investigated	x	o
c. Buffer harvest prescriptions described	x	o
d. Period 1 timber harvest estimates provided	x	o
e. Buffer management proposal accepted	x	o

Comments:

8 (iv) b selection harvest was not simulated in model but was proposed from an estimation .

9. The Licensee's first non-spatial submission of the management plan met minimum standards as defined in the document entitled "A vision for New Brunswick Forests Goals and Objectives for Crown Land Management" (1994) .. . . . . o x

Comments:

Submitted October 11, 95: 1) net MCFH objective not met. 2) biodiversty objective not met with the proposed scenario. 3) public input objective not met, ie. public input was not solicited. 4) DWA management analysis not to standard as required in the management plan format. 5) Several tables and figures required as part of the management plan format were not provided.

LICENSE: 2 (SCCI)

Phase 2. The geographic lay-out for strategy implementation, will be deemed acceptable if Licensee:

1. Lays out and characterizes the harvest schedule for a minimum of 25 years (or until such time as the point of minimum softwood growing stock is reached up to a maximum of 35 years), describing the harvest schedule as follows:

	Yes	No
(i) Harvest Block File:		
a. Region	x	o
b. License	x	o
c. Block #	x	o
d. Map #	x	o
e. Area (ha)	x	o
f. Type of harvest	x	o
g. Deer Wintering Area Management Unit Number	x	o
h. Supply run (SW or HW)	x	o
i. Harvest volume of species group (by period)	x	o
j. List of adjacent block numbers	N/A o	o
(ii) Harvest Stand File:		
a. Map #	x	o
b. Stand #	x	o
c. Block #	x	o
d. Area in block	x	o
e. Harvest volume by species group (by period)	x	o

Comments:

_____

_____

_____

_____

LICENSE: 2 (SCCI)

		Yes	No
2.	Identifies spacing and commercial thinning areas for the first 5 years	x	o

Comments:

Licensee not required to block spacing area, will be identified yearly at the operating plan level

3. Sequences blocks for harvest based on the following criteria:

a.	A minimum harvest delay of 2 periods between adjacent harvest blocks which comprise a total area exceeding a maximum opening of 100 ha	x	o
b.	The distribution of harvest types by period approved in Phase 1 of the management plan	x	o

Comments:

		Item 8 above	
4.	Describes the impact of the mapped strategy for all indicators listed in Phase 1, ...	x	o

Comments:

Very limited "Discussion" and "Conclusion and Recommendations" sections (pp 68-72) which do not treat every important aspect of the spatial plan.

Execution of the two phases of the management planning process must be performed in sequence and evaluation of both steps will be made upon submission of each phase as they are completed. The management alternatives (Phase 1) will be submitted and an appropriate strategy selected prior to proceeding with geographic layout (Phase 2). If both phases are accepted, the Licensee management planning performance will be acceptable in the context of the Performance Evaluation criteria.

LICENSE: Nepisiguit - SCCI

HARVEST SCHEDULE
(volumes in m^3)

Year		Softwood* Volume Harvested From Period 1 Blocks		Total Softwood* Volume Harvested [1]
1993-94		208,977		208,977
1994-95		277,619		277,619
1995-96		325,867		325,867
1996-97		339,767		339,767[2] (328,836)
1997-98 **		289,995		289,995
TOTAL	a)	1,442,225	b)	1,442,225 (1,431,294)

Performance Measure = a ÷ b x 100 = 100 %

* Spruce, Fir, Jack Pine
** Proposed in 1997-98 Operating Plan

Regional Comments:

[1] Source - Annual Reports.

[2] The 1996-97 softwood volume includes 10,931 m^3 which was authorized above AAC due to fire salvage (44 Mile Fire and St. Sauveur Fire). The volume harvested compared to the AAC over the 1993-97 Period was 99% (1,431,294 ÷ 1,445,425). There were 13 Period 1 blocks which were not submitted as operating plan blocks. Several of these were stable and suitable for a later period. Thirty six blocks (1,670 ha) which were not Period 1 were approved in the 1996-97 operating plan. These blocks were required to replace volumes lost due to 13 blocks mentioned plus unmapped brooks and inoperable areas. There were three major fires on the License including California Lake 1995, St. Sauveur 1996 and Forty Four Mile 1996.

1998-01-08

LICENSE: NEPISIGUIT

BASIC SILVICULTURE
(areas in hectares)

Area Treated to Standard

Year	Basic Planting	Sw Spacing[1]	(a) Total[2]	(b) Basic Requirement	HW Spacing	DWA Planting	Red Pine Cedar[3] Larch
1992-93	861.7	286.3	1,148.0	900 + 285 = 1,185	NA	Nil	Nil
1993-94	623.0	586.8	1,209.8	600 + 600 = 1,200	NA	11.5	Nil
1994-95	597.6	632.1	1,229.7	600 + 600 = 1,200	NA	14.2	48.2
1995-96	556.6	608.4	1,165.0	600 + 600 = 1,200	772.5	11.5	26.8
1996-97	505.2	846.0	1,351.2	600 + 600 = 1,200	1,065.0	Nil	8.9
Total	3,144.1	2,959.6	a) 6,103.7	b) 5,985	1,837.5	37.2	83.9

Silviculture Effort = a ÷ b x 100 = 6,103.7 ÷ 5,985 = 102%.

Regional Comments:

[1] Includes Basic Cleaning and Basic Thinning and Expanded Sw (194.0 ha).
[2] Includes Basic Planting and SW Spacing.
[3].Management Plan required planting 40 ha per year of other species in addition to 600 ha of basic.
The Management Plan Objective to treat 40 ha per year of other species was not fully achieved.
Planting levels were difficult to achieve because of 1) reduced harvest levels in 1991-93 and 2) abundant natural regeneration on the License.
Softwood thinning levels were achieved plus an additional 1,837.5 ha of hardwood were spaced. An additional 37.2 ha were planted in a DWA.
Total area of planting = 3,265.20
Total area of softwood spacing = 2,959.6

The introduction of Fill Planting and Hardwood Thinning during this period posed new challenges. No Fill Planting was done in 1996.

1998-01-05

id: basic silviculture

LICENSE: Nepisiguit - SCCI

REMEDIAL TREATMENT OF PLANTATIONS
(areas in hectares)

Year of Establishment	Area Requiring Treatment	Treatable* Area	Actual Area Treated To Standard
1983	330	330	0
1984	555	555	0
1985	12	12	0
1986	61	61	0
1987	214	214	0
1988	257	257	0
1989	185	185	0
1990	234	0	21.8
TOTAL	1,848	a) 1,614	b) 21.8

Performance Measure = b ÷ a x 100 = 1.3 %

* Area determined suitable for treatment prior to March 31, 1997.

Regional Comments:

LICENSE: Nepisiguit - SCCI

FISH HABITAT PROTECTION

Year		Number of Watercourse Crossings Installed*		Number of Watercourse Crossings Where Monetary Penalties Were Incurred
1992-93		9		1 (86%)
1993-94		15		0 (100%)
1994-95**		9		2 (78%)
1995-96		32		0 (100%)
1996-97		16 (op. pl.)		1 (94%)
TOTAL	a)	80	b)	4 (95%)

Performance Measure = (1-(b ÷ a)) x 100 = 95 %

* Applies to all natural watercourses
** Includes from 1994 to March 31/97 all watercourse crossings installed by Sub-licensees that were under the supervision of the Licensee during the period.

Regional Comments:

Supplement to SCCI Fish Habitat Protection evaluation 1992-1997

District	Date	Infrac. No.	Block No.	Comment	$ Penalty
1996-1997					
1-3	Nov 8/96	24	4543 (Stone)	Excess Bulldozing	500
1995-1996					
None					
1994-1995					
1-3	Nov 13/94	30	5583 (Bélanger)	Improper installation	100
1-4	Feb 23/95	27	6019	Unauthorized installation	500
1993-1994					
None					
1992-1993					
1-4	Aug 12/93	28	5524 (Stone)	Improper installation	500

LICENSE: Nepisiguit - SCCI

WILDLIFE HABITAT MANAGEMENT

1. Component: Harvesting Without Approval

Year		Number of Blocks In Or Directly Adjacent To *Site-Specific Wildlife Habitats		Number of Blocks In Or Directly Adjacent To Site Specific Habititats In Which Penalties Were Applied For Harvesting Without Approval In The Site Specific Habitat
1992-93		51		0
1993-94		62		0
1994-95		61		0
1995-96		117		0
1996-97		60		0
TOTAL	a)	351	b)	0

Performance Measure = (1-(b ÷ a)) x 100 = 100 %

Note: * As defined on page 14 of the Licensee Performance Evaluation document (July 1993)

Regional Comments:

There was no monetary penalty for violations in buffers during this period.

LICENSE: Nepisiguit - SCCI

WILDLIFE HABITAT MANAGEMENT

2. Component: Not Following Approved Harvest Prescription

Year	Number of Blocks In Site-Specific Wildlife Habitats		Number of Blocks In Site-Specific Habitats Which Penalties Were Applied For Not Following Prescription	
1992-93				
1993-94				
1994-95				
1995-96				
1996-97				
TOTAL	a)	0	b)	0

Performance Measure = (1-(b ÷ a)) x 100 = %

Regional Comments:

No special prescriptions were done during this period.

LICENSE: Nepisiguit - SCCI

WILDLIFE HABITAT MANAGEMENT

3. Component: Submission and Implementation of DWAMU Management Plans for Period I

Year	Area of DWAMU Management Identified for Period I (92-97)		Area of DWAMU For Which Management Plans Were Submitted And Implemented In Period I (92-97)	
1992-97				
TOTAL	a)	0	b)	0

Performance Measure = (1-(b ÷ a)) x 100 = %

Regional Comments:

No management actions were done or proposed during this period. Work was done on the collection of inventory data for the 1997 Management Plan.

STANDARDS FOR ACCEPTANCE OF MANAGEMENT PLANS
LICENSE: MIRAMICHI – LOWER #3

The forest management planning process is comprised of two phases:

1) the evaluation of management alternatives for the purpose of selecting an appropriate strategy; and,
2) geographic layout of that strategy for the purpose of implementation.

Both phases must be satisfactorily performed for the Licensees' plan to be deemed acceptable.

Phase 1 of the planning effort will be deemed acceptable if all the following steps are performed[1].

1. The Licensee provides the following resource information:	Yes	No
a. Permanent sample plot data	X	☐
b. 5th year survey data	X	☐
c. Annual reports	X	☐
d. Pre-82 survey data	X	☐
e. Maps of operationally inaccessible areas	X	☐

Comments:

_____

_____

_____

_____

_____

2. Stand level forecasts are made using DNRE approved models for the following stand conditions:		
a. Managed	X	☐
b. Natural cutovers	X	☐
c. Even-aged merchantable (clearcut and 2-pass)	X	☐
d. Uneven-aged suitable for selection harvest (hardwood and softwood types)	X	☐

1 For details on the criteria listed here, refer to the document entitled "A vision for New Brunswick Forests, Goals and Objectives for Crown Land Management, 1994".

LICENSE: MIRAMICHI – LOWER #3

e. Pre/post cut transition	X	☐

Comments:

Staman was used.

	Yes	No
3. Stand development is characterized by the following parameters:		
a. Volume by species	X	☐
b. Mean piece-size	X	☐
c. Log content to 15 cm top	X	☐
d. Percent softwood by volume	X	☐
e. Limits to operability	X	☐
f. Time frame of suitability for deer winter cover	X	☐
g. Time frame of suitability as mature softwood habitat	X	☐

Comments:

4. Each stand on the License is characterized for the following conditions:

(i) Biological:

a. Species composition	X	☐
b. Growth rate	X	☐
c. Site quality	X	☐
d. Harvest transition	X	☐
e. Suitability for 2-pass even-aged	X	☐

LICENSE: MIRAMICHI – LOWER #3

	Yes	No
f. Suitability for uneven aged cutting cycle	X	☐
g. Suitability for silviculture (i.e., planting, spacing and commercial thinning)	X	☐

(ii) Physical:

a. Operationally inaccessible	X	☐
b. Riparian buffer	X	☐
c. Legal Reserve	X	☐
d. Deer Wintering Area Management Units	X	☐

Comments:

5. A computer readable file of the classification results determined in ..... X ☐
Item 4 above is supplied to the Department.

Comments:

6. DNRE approved forest level models are employed to analyse even and uneven aged management for the stand types determined in Item 4 above. X ☐

LICENSE: MIRAMICHI – LOWER #3

Comments:

Woodstock was used.

7. Forest level analyses are performed which explicitly include the following biologically feasible range of inputs:

(i) Silviculture	Yes	No
a. Planting – amount, priority criteria, and species	X	☐
b. Spacing – amount and priority criteria	X	☐
c. Commercial thinning – amount and priority criteria	X	☐
(ii) Harvest		
a. Clear-cut – amount and priority criteria	X	☐
b. 2-pass partial cut – amount, priority criteria and type	X	☐
c. Selection (uneven-aged) – amount, priority criteria and type	X	☐

Comments:

7. Forest level results for each combination of inputs listed in Item 7 above are expressed by period for each of the following indicators.

	Yes	No
(i) Timber		
a. Sustainable fibre supply and volume by source and harvest method ..	X	☐

LICENSE: MIRAMICHI - LOWER #3

	Yes	No
b. Log supply for current specifications	X	O
c. Mean tree size profile	X	O
d. Fallout species profile	X	O
e. Silviculture costs	N/A O	O

(ii) Mature Coniferous Forest Habitat

	Yes	No
a. Net MCFH Objective identified	X	O
b. Net MCFH Objective met for periods 1 through 7	X	O
c. MCFH Blocks meet composition and spatial criteria	X	O
d. MCFH/DWA overlap factored into block projections (if overlap is significant)	X	O
e. MCFH Block summary sheets provide information as in "Mock Plan" appendix 7	X	O
f. Period 1 timber harvest estimates provided	X	O
g. MCFH Block stand-level class files provided	X	O
h. MCFH Block stand files provided	X	O
i. MCFH Blocks delinated on management plan map	X	O
j. Gross MCFH Objective calculated	X	O
k. Gross MCFH Objective met for periods 8 through 16	X	O
l. MCFH management proposal accepted	X	O

Comments:

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LICENSE: MIRAMICHI – LOWER #3

(iii) Deer Wintering Areas	Yes	No
a. Group 1 DWA management summarized (i.e. 1993-97 DWA Mgmt. Plans)	X	☐
b. Group 2 DWA management scenarios (1997+) presented.....	X	☐
c. Period 1 DWA area identified (i.e. for P1 DWA Mgmt. Plan development)	X	☐
d. Period 1 timber harvest estimates provided	X	☐
e. FORMAN files and environments provided	X	☐
f. DWA boundaries delineated on management plan maps	X	☐
g. DCWH supply and management proposal accepted	X	☐

Comments:

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(iv) Watercourse Buffer Zones	Yes	No
a. Buffer widths by feature presented	X	☐
b. Potential for timber harvest investigated	X	☐
c. Buffer harvest prescriptions described	X	☐
d. Period 1 timber harvest estimates provided	X	☐
e. Buffer management proposal accepted	X	☐

8. The Licensee's first non-spatial submission of the management plan met minimum standards as defined in the document entitled "A vision for New Brunswick Forests Goals and Objectives for Crown Land Management" (1994) ..... X ☐

Comments:

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LICENSE: MIRAMICHI – LOWER #3

Phase 2. The geographic lay-out for strategy implementation, will be deemed acceptable if Licensee:

1. Lays out and characterizes the harvest schedule for a minimum of 25 years (or until such time as the point of minimum softwood growing stock is reached up to a maximum of 35 years), describing the harvest schedule as follows:

(i) Harvest Block File:	**Yes**	**No**
a. Region	☐	X
b. License	☐	X
c. Block #	X	☐
d. Map #	X	☐
e. Area (ha)	X	☐
f. Type of harvest	X	☐
g. Deer Wintering Area Management Unit Number	☐	X
h. Supply run (SW or HW)	X	☐
i. Harvest volume of species group (by period)	X	☐
j. List of adjacent block numbers	☐	X
(ii) Harvest Stand File:		
a. Map #	X	☐
b. Stand #	X	☐
c. Block #	X	☐
d. Area in block	X	☐
e. Harvest volume by species group (by period)	☐	X

Comments:

DWAMU's are listed in the stand file, not the block file.

LICENSE: MIRAMICHI – LOWER #3

		Yes	No
2.	Identifies spacing and commercial thinning areas for the first 5 years	☐	X

Comments:

3. Sequences blocks for harvest based on the following criteria:

a.	A minimum harvest delay of 2 periods between adjacent harvest blocks which comprise a total area exceeding a maximum opening of 100 ha	X	☐
b.	The distribution of harvest types by period approved in Phase 1 of the management plan	X	☐

Comments:

Item 8 above

4.	Describes the impact of the mapped strategy for all indicators listed in Phase 1	X	☐

Comments:

Execution of the two phases of the management planning process must be performed in sequence and evaluation of both steps will be made upon submission of each phase as they are completed. The management alternatives (Phase 1) will be submitted and an appropriate strategy selected prior to proceeding with geographic layout (Phase 2). If both phases are accepted, the Licensee management planning performance will be acceptable in the context of the Performance Evaluation criteria.

LICENSE: MIRAMICHI - LOWER #3

		Yes	No
2.	Identifies spacing and commercial thinning areas for the first 5 years	x	o

Comments:

Licensee not required to block spacing area, will be identified yearly at the operating plan level

3.	Sequences blocks for harvest based on the following criteria:		
	a. A minimum harvest delay of 2 periods between adjacent harvest blocks which comprise a total area exceeding a maximum opening of 100 ha	x	o
	b. The distribution of harvest types by period approved in Phase 1 of the management plan	x	o

Comments:

4.	Describes the impact of the mapped strategy for all indicators listed in Phase 1,	Item 8 above ... x	o

Comments:

Execution of the two phases of the management planning process must be performed in sequence and evaluation of both steps will be made upon submission of each phase as they are completed. The management alternatives (Phase 1) will be submitted and an appropriate strategy selected prior to proceeding with geographic layout (Phase 2). If both phases are accepted, the Licensee management planning performance will be acceptable in the context of the Performance Evaluation criteria.

LICENSE: MIRAMICHI – LOWER #3

HARVEST SCHEDULE
(volumes in m^3)

Year		Softwood* Volume Harvested From Period 1 Blocks		Total Softwood* Volume Harvested
1993-94		330,465		330,465
1994-95		328,957		328,957
1995-96		89,070		89,070
1996-97		173,344		173,344
1997-98 **		324,627		324,627
TOTAL	a)	1,246,463	b)	1,246,463

Performance Measure = a ÷ b x 100 = 100%

* Spruce, Fir, Jack Pine
** Proposed in 1997-98 Operating Plan

Regional Comments:

As we do not approve blocks outside of the approved Period I blocks unless they are of Period I quality – ie. "oldest-worst-first", both columns will always be equal.

The average annual softwood harvest for the period was 76% of the license #3 total softwood allocation. The highest harvest level attained was 101% during the 1993 and 1994 operating years. The 1995 and 1996 operating years indicate a very low harvest level because license #3 work crews were diverted to license #4 blowdown salvage operations.

LICENSE: MIRAMICHI – LOWER #3

BASIC SILVICULTURE
(areas in hectares)

	Area Treated to Standard			
Year	Planting	Spacing	Total	Basic Requirement
1992-93	784.8	1057.3	1842.1	1430
1993-94	960.5	1503.4	2463.9	1630
1994-95	565.5	1767.6	2333.1	1630
1995-96	509.2	1178.8	1688.0	1630
1996-97	894.7	1413.9	2308.6	1630
TOTAL	3714.7	6921.0	a) 10,635.7	b) 7950

Silviculture Effort = a ÷ b x 100 = 133.8%

Regional Comments:

1) When combined with the Upper Miramichi License Silviculture effort as per the agreement, the resulting silviculture effort was 97.3%.

2) Invoices and certificates were submitted unreasonably late with respect to established deadlines

Hardwood Spacing = 89.8 Ha

Note: In comments section, please identify the total area of both softwood and hardwood spacing carried out during the period.

Natural Resources and Energy
Ressources naturelles et Énergie

New Nouveau Brunswick

80 Pleasant Street
Newcastle, N.B.
E1V 1X7

February 23, 1995

Mr. Jan Ellingsen
Management Forester License #4
REPAP Miramichi
P.O. Box 5040
Newcastle, N.B.
E1V 3N3

Dear Jan:

In response to your letter of February 8, please be advised that your "understanding" is correct; a shortfall in License #4 PCT areas may be offset by a corresponding increase for License #3. This approach has been endorsed in discussions with Timber Management Branch. The degree to which this occurs must be driven by the shortfall of eligible treatment area on License #4, as opposed to an available identified surplus on License #3.

We anticipate the License #4 shortfall situation to be temporary. Within a few years significant area in the "Big South" should satisfy treatment criteria. There also may be opportunities to thin some of the dense regenerating fir areas prior to the attainment of a 2 metre average height(ie: where treatment response wouldn't be compromised by slight relaxation of guidelines). This could be assessed on a site basis and may provide another means to address the shortfall.

Please call if you have any questions or concerns.

Sincerely,

Jeffrey R. Patch
Regional Resource Manager

cc: T. Spinney
R. Walker
S. Jones

Miramichi

February 8, 1995

Mr. Jeff Patch
Regional Resource Manager
Department of Natural Resources and Energy
80 Pleasant Street
Newcastle, NB
E1V 1X7

Subject: ***Possible Shortfall in License #4's 5 Year Spacing requirements.***

Dear Jeff:

With reference to our discussion on the above topic, it is my understanding that if we can not find the necessary hectares on License #4 to meet our 5 year Pre-commercial Thinning goals (we have 2 years left to go), we can make up the difference on License #3.

This to me makes good forestry sense, as we currently have a surplus on License #3 of areas that can be treated.

The 1995 Silviculture Operating Plan will therefore reflect this, as we will be submitting areas on License #3 that will be over and above the quotas for that license.

Your department's attitude on this matter was much appreciated.

Yours truly,

Jan Ellingsen
Management Forester License #4

c.c. Steve Jones

\amj

Miramichi Pulp & Paper Inc.
Woodlands Division
P.O. Box 5040, Newcastle, New Brunswick, Canada E1V 3N3 • Telephone (506) 627-3727 • Telefax (506) 622-5702

LICENSE: MIRAMICHI – LOWER #3

REMEDIAL TREATMENT OF PLANTATIONS
(areas in hectares)

Year of Establishment	Area Requiring Treatment	Treatable* Area	Actual Area Treated To Standard
1983	542.8	542.8	461.8
1984	619.0	619.0	230.0
1985	359.0	359.0	131.0
1986	138.0	138.0	66.0
1987	342.0	342.0	0.0
1988	180.8	180.8	95.8
1989	591.0	497.0	0.0
1990	266.0	249.0	0.0
TOTAL		**a) 2927.6**	**b) 984.6**

Performance Measure = b ÷ a x 100 = 33.6%

* Area determined suitable for treatment prior to March 31, 1997.

Regional Comments:

A more concerted effort is required to catch-up with the backlog of plantations to be remedially treated.

The "area requiring treatment" and "treatable area" columns are equal due to actual DNRE field assessments of the "failed' and "check" fifth year assessments categories for plantations.

LICENSE: MIRAMICHI – LOWER #3

FISH HABITAT PROTECTION

Year		Number of Watercourse Crossings Installed*		Number of Watercourse Crossings Where Monetary Penalties Were Incurred
1992-93		75		3
1993-94		86		3
1994-95**		56		0
1995-96		24		1
1996-97		24		1
TOTAL	a)	265	b)	8

Performance Measure = (1-(b ÷ a)) x 100 = 97%

* Applies to all natural watercourses
** Includes from 1994 to March 31/97 all watercourse crossings installed by Sub-licensees that were under the supervision of the Licensee during the period.

Regional Comments:

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LICENSE: MIRAMICHI – LOWER #3

WILDLIFE HABITAT MANAGEMENT

1. Component: Harvesting Without Approval

Year		Number Of Blocks In Or Directly Adjacent To *Site-Specific Wildlife Habitats		Number Of Blocks In Or Directly Adjacent To Site Specific Habitats In Which Penalties Were Applied For Harvesting Without Approval In The Site Specific Habitat
1992-93		54		—
1993-94		66		—
1994-95		74		—
1995-96		38		—
1996-97		66		—
TOTAL	a)	298	b)	0

Performance Measure = (1-(b ÷ a)) x 100 = 100%

Note: * As defined on page 14 of the Licensee Performance Evaluation document (July 1993)

Regional Comments:

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LICENSE: MIRAMICHI – LOWER #3

WILDLIFE HABITAT MANAGEMENT

2. Component: Not Following Approved Harvest Prescription

Year		Number of Blocks In Site-Specific Wildlife Habitats		Number Of Blocks In Site-Specific Habitats Which Penalties Were Applied For Not Following Prescription
1992-93		4		—
1993-94		1		—
1994-95		7		—
1995-96		2		—
1996-98		4		—
TOTAL	a)	18	b)	0

Performance Measure = (1-(b ÷ a)) x 100 = 100%

Regional Comments:

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LICENSE: MIRAMICHI – LOWER #3

WILDLIFE HABITAT MANAGEMENT

3. Component: Submission and Implementation of DWAMU Management Plans for Period I

Year		Area Of DWAMU Management Identified For Period I (92-97)		Area of DWAMU For Which Management Plans Were Submitted And Implemented in Period I (92-97)
1992-97		1309		1359
TOTAL	a)	1309	b)	1359

Performance Measure = (b ÷ a)) x 100 = 103.8%

Regional Comments:

Licensee committed themselves to develop DWAMU plans for 5 DWAMU's, but three were combined into one, so three plans were submitted. The performance threshold is 980 ha.

STANDARDS FOR ACCEPTANCE OF MANAGEMENT PLANS
LICENSE: MIRAMICHI – UPPER #4

The forest management planning process is comprised of two phases:

1) the evaluation of management alternatives for the purpose of selecting an appropriate strategy; and,
2) geographic layout of that strategy for the purpose of implementation.

Both phases must be satisfactorily performed for the Licensees' plan to be deemed acceptable.

Phase 1 of the planning effort will be deemed acceptable if all the following steps are performed[1].

1. The Licensee provides the following resource information:	Yes	No
a. Permanent sample plot data	X	☐
b. 5th year survey data	X	☐
c. Annual reports	X	☐
d. Pre-82 survey data	X	☐
e. Maps of operationally inaccessible areas	X	☐

Comments:

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2. Stand level forecasts are made using DNRE approved models for the following stand conditions:		
a. Managed	X	☐
b. Natural cutovers	X	☐
c. Even-aged merchantable (clearcut and 2-pass)	X	☐
d. Uneven-aged suitable for selection harvest (hardwood and softwood types)	X	☐

1 For details on the criteria listed here, refer to the document entitled "A vision for New Brunswick Forests, Goals and Objectives for Crown Land Management, 1994".

LICENSE: MIRAMICHI - UPPER #4

e. Pre/post cut transition ..... X O

Comments:

The STAMAN stand model was used

3. Stand development is characterized by the following parameters: Yes No

a. Volume by species ..... X O

b. Mean piece-size ..... X O

c. Log content to 15 cm top ..... X O

d. Percent softwood by volume ..... X O

e. Limits to operability ..... X O

f. Time frame of suitability for deer winter cover ..... X O

g. Time frame of suitability as mature softwood habitat ..... X O

Comments:

4. Each stand on the License is characterized for the following conditions:

(I) Biological:

a. Species composition ..... X O

b. Growth rate ..... X O

c. Site quality ..... X O

d. Harvest transition ..... X O

e. Suitability for 2 pass even-aged ..... X O

LICENSE: MIRAMICHI – UPPER #4

	Yes	No
f. Suitability for uneven aged cutting cycle	X	☐
g. Suitability for silviculture (i.e., planting, spacing and commercial thinning)	X	☐

(ii) Physical:

a. Operationally inaccessible	X	☐
b. Riparian buffer	X	☐
c. Legal Reserve	X	☐
d. Deer Wintering Area Management Units	X	☐

Comments:

5. A computer readable file of the classification results determined in ..... X ☐
Item 4 above is supplied to the Department.

Comments:

6. DNRE approved forest level models are employed to analyse even and uneven aged management for the stand types determined in Item 4 above. X ☐

LICENSE: MIRAMICHI – UPPER #4

Comments:

Woodstock model was used.

7. Forest level analyses are performed which explicitly include the following biologically feasible range of inputs:

(i) Silviculture	Yes	No
a. Planting – amount, priority criteria, and species	X	☐
b. Spacing – amount and priority criteria	X	☐
c. Commercial thinning – amount and priority criteria	X	☐
(ii) Harvest		
a. Clear-cut – amount and priority criteria	X	☐
b. 2-pass partial cut – amount, priority criteria and type	X	☐
c. Selection (uneven-aged) – amount, priority criteria and type	X	☐

Comments:

7. Forest level results for each combination of inputs listed in Item 7 above are expressed by period for each of the following indicators.

	Yes	No
(i) Timber		
a. Sustainable fibre supply and volume by source and harvest method ..	X	☐

LICENSE: MIRAMICHI - UPPER #4

	Yes	No
b. Log supply for current specifications	X	O
c. Mean tree size profile	X	O
d. Fallout species profile	X	O
e. Silviculture costs	N/A O	O

(ii) Mature Coniferous Forest Habitat

	Yes	No
a. Net MCFH Objective identified	X	O
b. Net MCFH Objective met for periods 1 through 7	X	O
c. MCFH Blocks meet composition and spatial criteria	X	O
d. MCFH/DWA overlap factored into block projections (if overlap is significant)	X	O
e. MCFH Block summary sheets provide information as in "Mock Plan" appendix 7	X	O
f. Period 1 timber harvest estimates provided	X	O
g. MCFH Block stand-level class files provided	X	O
h. MCFH Block stand files provided	X	O
i. MCFH Blocks delinated on management plan map	X	O
j. Gross MCFH Objective calculated	X	O
k. Gross MCFH Objective met for periods 8 through 16	X	O
l. MCFH management proposal accepted	X	O

Comments:

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LICENSE: MIRAMICHI – UPPER #4

(iii) Deer Wintering Areas	Yes	No
a. Group 1 DWA management summarized (i.e. 1993-97 DWA Mgmt. Plans)	X	☐
b. Group 2 DWA management scenarios (1997+) presented.....	X	☐
c. Period 1 DWA area identified (i.e. for P1 DWA Mgmt. Plan development)	X	☐
d. Period 1 timber harvest estimates provided	X	☐
e. FORMAN files and environments provided	X	☐
f. DWA boundaries delineated on management plan maps	X	☐
g. DCWH supply and management proposal accepted	X	☐

Comments:

_____

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(iv) Watercourse Buffer Zones	Yes	No
a. Buffer widths by feature presented	X	☐
b. Potential for timber harvest investigated	X	☐
c. Buffer harvest prescriptions described	X	☐
d. Period 1 timber harvest estimates provided	X	☐
e. Buffer management proposal accepted	X	☐

8. The Licensee's first non-spatial submission of the management plan met minimum standards as defined in the document entitled "A vision for New Brunswick Forests Goals and Objectives for Crown Land Management" (1994) ..... X ☐

Comments:

_____

_____

_____

_____

LICENSE: MIRAMICHI – UPPER #4

Phase 2. The geographic lay-out for strategy implementation, will be deemed acceptable if Licensee:

1. Lays out and characterizes the harvest schedule for a minimum of 25 years (or until such time as the point of minimum softwood growing stock is reached up to a maximum of 35 years), describing the harvest schedule as follows:

(i) Harvest Block File:	**Yes**	**No**
a. Region	☐	X
b. License	☐	X
c. Block #	X	☐
d. Map #	X	☐
e. Area (ha)	X	☐
f. Type of harvest	X	☐
g. Deer Wintering Area Management Unit Number	☐	X
h. Supply run (SW or HW)	X	☐
i. Harvest volume of species group (by period)	X	☐
j. List of adjacent block numbers	X	☐
(ii) Harvest Stand File:		
a. Map #	X	☐
b. Stand #	X	☐
c. Block #	X	☐
d. Area in block	X	☐
e. Harvest volume by species group (by period)	☐	X

Comments:

DWAMU's are listed in the stand file, not the block file.

LICENSE: MIRAMICHI - UPPER #4

		Yes	No
2.	Identifies spacing and commercial thinning areas for the first 5 years	x	o

Comments:

Licensee not required to block spacing area, will be identified yearly at the operating plan level

		Yes	No
3.	Sequences blocks for harvest based on the following criteria:		
	a. A minimum harvest delay of 2 periods between adjacent harvest blocks which comprise a total area exceeding a maximum opening of 100 ha	x	o
	b. The distribution of harvest types by period approved in Phase 1 of the management plan	x	o

Comments:

		Item 8 above	
4.	Describes the impact of the mapped strategy for all indicators listed in Phase 1, ...	x	o

Comments:

Execution of the two phases of the management planning process must be performed in sequence and evaluation of both steps will be made upon submission of each phase as they are completed. The management alternatives (Phase 1) will be submitted and an appropriate strategy selected prior to proceeding with geographic layout (Phase 2). If both phases are accepted, the Licensee management planning performance will be acceptable in the context of the Performance Evaluation criteria.

LICENSE: MIRAMICHI – UPPER #4

HARVEST SCHEDULE
(volumes in m^3)

Year		Softwood* Volume Harvested From Period 1 Blocks		Total Softwood* Volume Harvested
1993-94		696,223		696,223
1994-95		626,689		626,689
1995-96		1,297,447		1,297,447
1996-97		862,629		862,629
1997-98 **		534,845		534,845
TOTAL	a)	4,017,833	b)	4,017,833

Performance Measure = a ÷ b x 100 = 100%

* Spruce, Fir, Jack Pine
** Proposed in 1997-98 Operating Plan

Regional Comments:

As we do not approve harvest blocks outside of those approved for Period I in the Management Plan unless they are of Period I quality – ie. "oldest-worst-first", both columns will always be equal.

The average annual softwood harvest for the period was 135.5% of the license #4 total softwood allocation. The highest harvest level attained was 210.3% during the 1995 operating year and 139.8% during the 1996 operating year as a result of the November 1994 extensive blowdown in the north western portion of the license. Licensees participating in the salvage were: Stone, Avenor, Juniper, Fraser, J. D. Irving and License #3. Agreements are in place with the participants to replace the volume harvested on License #4 over a five year period.

LICENSE: MIRAMICHI – UPPER #4

BASIC SILVICULTURE
(areas in hectares)

Area Treated to Standard

Year	Planting	Spacing	Total	Basic Requirement
1992-93	979.8	1835.5	2815.3	3125
1993-94	395.8	1585.4	1981.2	3125
1994-95	610.7	1691.4	2302.1	3125
1995-96	478.1	2523.2	3001.3	3125
1996-97	353.4	1855.5	2208.9	3125
TOTAL	**2817.8**	**9491.0**	**a) 12,308.8**	**b) 15625**

Silviculture Effort = a ÷ b x 100 = 78.8%

Regional Comments:

Final map and invoice submissions were extremely past due with respect to the established deadlines.

Hardwood Spacing = 277.0 Ha

Note: In comments section, please identify the total area of both softwood and hardwood spacing carried out during the period.

LICENSE: MIRAMICHI – UPPER #4

REMEDIAL TREATMENT OF PLANTATIONS
(areas in hectares)

Year of Establishment	Area Requiring Treatment	Treatable* Area	Actual Area Treated To Standard
1983	0.0	0.0	0.0
1984	755.1	755.1	115.1
1985	540.0	540.0	0.0
1986	0.0	0.0	0.0
1987	20.0	20.0	0.0
1988	138.0	138.0	0.0
1989	740.2**	N/A*	N/A*
1990	624.6**	N/A*	N/A*
TOTAL		**a) 1453.1**	**b) 115.1**

Performance Measure = b ÷ a x 100 = 7.9%

* Area determined suitable for treatment prior to March 31, 1997.

Regional Comments:

* Fifth year assessments were not completed by the Licensee in 1994 and 1995 for the years 1989 and 1990.

** Reflects area that should have been sampled in 1994 and 1995.

The "area requiring treatment" and "treatable area" columns are equal due to actual DNRE field assessments of the "failed' and "check" fifth year assessments categories for plantations.

LICENSE: MIRAMICHI – UPPER #4

FISH HABITAT PROTECTION

Year		Number of Watercourse Crossings Installed*		Number of Watercourse Crossings Where Monetary Penalties Were Incurred
1992-93		42		1
1993-94		64		-
1994-95**		73		-
1995-96		39		-
1996-97		70		1
TOTAL	a)	288	b)	2

Performance Measure = (1-(b ÷ a)) x 100 = 99.4%

* Applies to all natural watercourses

** Includes from 1994 to March 31/97 all watercourse crossings installed by Sub-licensees that were under the supervision of the Licensee during the period.

Regional Comments:

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LICENSE: MIRAMICHI – UPPER #4

WILDLIFE HABITAT MANAGEMENT

1. Component: Harvesting Without Approval

Year		Number Of Blocks In Or Directly Adjacent To *Site-Specific Wildlife Habitats		Number Of Blocks In Or Directly Adjacent To Site Specific Habitats In Which Penalties Were Applied For Harvesting Without Approval In The Site Specific Habitat
1992-93		58		—
1993-94		67		—
1994-95		77		—
1995-96		91		1
1996-97		113		—
TOTAL	a)	406	b)	1

Performance Measure = (1-(b ÷ a)) x 100 = 99.8%

Note: * As defined on page 14 of the Licensee Performance Evaluation document (July 1993)

Regional Comments:

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LICENSE: MIRAMICHI – UPPER #4

WILDLIFE HABITAT MANAGEMENT

2. Component: Not Following Approved Harvest Prescription

Year		Number of Blocks In Site-Specific Wildlife Habitats		Number Of Blocks In Site-Specific Habitats Which Penalties Were Applied For Not Following Prescription
1992-93		1		—
1993-94		2		—
1994-95		6		—
1995-96		6		—
1996-98		14		—
TOTAL	a)	29	b)	0

Performance Measure = (1-(b ÷ a)) x 100 = 100%

Regional Comments:

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LICENSE: MIRAMICHI – UPPER #4

WILDLIFE HABITAT MANAGEMENT

3. Component: Submission and Implementation of DWAMU Management Plans for Period I

Year		Area Of DWAMU Management Identified For Period I (92-97)		Area of DWAMU For Which Management Plans Were Submitted And Implemented in Period I (92-97)
1992-97		416		409
TOTAL	a)	416	b)	409

Performance Measure = (b ÷ a)) x 100 = 98.3%

Regional Comments:

The Licensee committed themselves to develop DWAMU plans for 1 DWAMU. The performance threshold is 310 ha.

STANDARDS FOR ACCEPTANCE OF MANAGEMENT PLANS
LICENSE: KENT – #5

The forest management planning process is comprised of two phases:

1) the evaluation of management alternatives for the purpose of selecting an appropriate strategy; and,
2) geographic layout of that strategy for the purpose of implementation.

Both phases must be satisfactorily performed for the Licensees' plan to be deemed acceptable.

Phase 1 of the planning effort will be deemed acceptable if all the following steps are performed[1].

1. The Licensee provides the following resource information:	Yes	No
a. Permanent sample plot data	X	☐
b. 5th year survey data	X	☐
c. Annual reports	X	☐
d. Pre-82 survey data	X	☐
e. Maps of operationally inaccessible areas	X	☐

Comments:

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2. Stand level forecasts are made using DNRE approved models for the following stand conditions:		
a. Managed	X	☐
b. Natural cutovers	X	☐
c. Even-aged merchantable (clearcut and 2-pass)	X	☐
d. Uneven-aged suitable for selection harvest (hardwood and softwood types)	X	☐

1 For details on the criteria listed here, refer to the document entitled "A vision for New Brunswick Forests, Goals and Objectives for Crown Land Management, 1994".

LICENSE: KENT #5

e. Pre/post cut transition	X	☐

Comments:

Staman used.

3. Stand development is characterized by the following parameters:

	Yes	No
a. Volume by species	X	☐
b. Mean piece-size	X	☐
c. Log content to 15 cm top	X	☐
d. Percent softwood by volume	X	☐
e. Limits to operability	X	☐
f. Time frame of suitability for deer winter cover	X	☐
g. Time frame of suitability as mature softwood habitat	X	☐

Comments:

4. Each stand on the License is characterized for the following conditions:

(i) Biological:

a. Species composition	X	☐
b. Growth rate	X	☐
c. Site quality	X	☐
d. Harvest transition	X	☐
e. Suitability for 2-pass even-aged	X	☐

LICENSE: KENT #5

	Yes	No
f. Suitability for uneven aged cutting cycle	X	☐
g. Suitability for silviculture (i.e., planting, spacing and commercial thinning)	X	☐

(ii) Physical:

a. Operationally inaccessible	X	☐
b. Riparian buffer	X	☐
c. Legal Reserve	X	☐
d. Deer Wintering Area Management Units	X	☐

Comments:

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5. A computer readable file of the classification results determined in ..... X ☐
Item 4 above is supplied to the Department.

Comments:

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6. DNRE approved forest level models are employed to analyse even and uneven aged management for the stand types determined in Item 4 above. X ☐

LICENSE: KENT #5

Comments:

7. Forest level analyses are performed which explicitly include the following biologically feasible range of inputs:

(i) Silviculture	Yes	No
a. Planting – amount, priority criteria, and species	X	☐
b. Spacing – amount and priority criteria	X	☐
c. Commercial thinning – amount and priority criteria	X	☐
(ii) Harvest		
a. Clear-cut – amount and priority criteria	X	☐
b. 2-pass partial cut – amount, priority criteria and type	X	☐
c. Selection (uneven-aged) – amount, priority criteria and type	X	☐

Comments:

7. Forest level results for each combination of inputs listed in Item 7 above are expressed by period for each of the following indicators.

	Yes	No
(i) Timber		
a. Sustainable fibre supply and volume by source and harvest method ..	X	☐

LICENSE: KENT # 5

	Yes	No
b. Log supply for current specifications	X	O
c. Mean tree size profile	X	O
d. Fallout species profile	X	O
e. Silviculture costs	N/A O	O

(ii) Mature Coniferous Forest Habitat

	Yes	No
a. Net MCFH Objective identified	X	O
b. Net MCFH Objective met for periods 1 through 7	X	O
c. MCFH Blocks meet composition and spatial criteria	X	O
d. MCFH/DWA overlap factored into block projections (if overlap is significant)	X	O
e. MCFH Block summary sheets provide information as in "Mock Plan" appendix 7	X	O
f. Period 1 timber harvest estimates provided	X	O
g. MCFH Block stand-level class files provided	X	O
h. MCFH Block stand files provided	X	O
i. MCFH Blocks delinated on management plan map	X	O
j. Gross MCFH Objective calculated	X	O
k. Gross MCFH Objective met for periods 8 through 16	X	O
l. MCFH management proposal accepted	X	O

Comments:

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LICENSE: KENT #5

(iii) Deer Wintering Areas	Yes	No	
a. Group 1 DWA management summarized (i.e. 1993-97 DWA Mgmt. Plans)	☐	X	N/A
b. Group 2 DWA management scenarios (1997+) presented.....	X	☐	
c. Period 1 DWA area identified (i.e. for P1 DWA Mgmt. Plan development)	X	☐	
d. Period 1 timber harvest estimates provided	X	☐	
e. FORMAN files and environments provided	X	☐	
f. DWA boundaries delineated on management plan maps	X	☐	
g. DCWH supply and management proposal accepted	X	☐	

Comments:

(iv) Watercourse Buffer Zones	Yes	No
a. Buffer widths by feature presented	X	☐
b. Potential for timber harvest investigated	X	☐
c. Buffer harvest prescriptions described	X	☐
d. Period 1 timber harvest estimates provided	X	☐
e. Buffer management proposal accepted	X	☐

8. The Licensee's first non-spatial submission of the management plan met minimum standards as defined in the document entitled "A vision for New Brunswick Forests Goals and Objectives for Crown Land Management" (1994) ..... X ☐

Comments:

LICENSE: KENT #5

Phase 2. The geographic lay-out for strategy implementation, will be deemed acceptable if Licensee:

1. Lays out and characterizes the harvest schedule for a minimum of 25 years (or until such time as the point of minimum softwood growing stock is reached up to a maximum of 35 years), describing the harvest schedule as follows:

(i) Harvest Block File:	**Yes**	**No**
a. Region	☐	X
b. License	X	☐
c. Block #	X	☐
d. Map #	X	☐
e. Area (ha)	X	☐
f. Type of harvest	X	☐
g. Deer Wintering Area Management Unit Number	☐	X
h. Supply run (SW or HW)	☐	X
i. Harvest volume of species group (by period)	X	☐
j. List of adjacent block numbers	☐	X
(ii) Harvest Stand File:		
a. Map #	X	☐
b. Stand #	X	☐
c. Block #	X	☐
d. Area in block	X	☐
e. Harvest volume by species group (by period)	X	☐

Comments:

Harvest description file only for Periods I and II – will get descriptions for up to low point.

Supply run listed in stand file -- not harvest file.

LICENSE: KENT #5

		Yes	No
2.	Identifies spacing and commercial thinning areas for the first 5 years	x	o

Comments:

Licensee not required to block spacing area, will be identified yearly at the operating plan level

3. Sequences blocks for harvest based on the following criteria:

a.	A minimum harvest delay of 2 periods between adjacent harvest blocks which comprise a total area exceeding a maximum opening of 100 ha	x	o
b.	The distribution of harvest types by period approved in Phase 1 of the management plan	x	o

Comments:

		Item 8 above	
4.	Describes the impact of the mapped strategy for all indicators listed in Phase 1, . . .	o	x

Comments:

No discussion included in management plan

Execution of the two phases of the management planning process must be performed in sequence and evaluation of both steps will be made upon submission of each phase as they are completed. The management alternatives (Phase 1) will be submitted and an appropriate strategy selected prior to proceeding with geographic layout (Phase 2). If both phases are accepted, the Licensee management planning performance will be acceptable in the context of the Performance Evaluation criteria.

LICENSE: KENT #5

HARVEST SCHEDULE
(volumes in m^3)

Year		Softwood* Volume Harvested From Period 1 Blocks		Total Softwood* Volume Harvested
1993-94		58,221		58,221
1994-95		59,085		59,085
1995-96		63,014		63,014
1996-97		61,400		61,400
1997-98 **		59,879		59,879
TOTAL	a)	301,599	b)	301,599

Performance Measure = a ÷ b x 100 = 100%

* Spruce, Fir, Jack Pine
** Proposed in 1997-98 Operating Plan

Regional Comments:

We do not approve blocks outside of the approved Period I blocks unless they are Period I quality – ie. "oldest-worst-first". Therefore, the two columns will always be equal.

Note: For a portion of 1992 and most of 1993 and 1994, the former Norbord was in receivership and the License was being managed by Doane Raymond. Since the Licensee was in receivership, there was no management plan until 1997. Period I blocks were selected by the Licensee from a pool of DNRE precuts for Period II and III blocks proposed in the 1988 Management Plan.

The average annual softwood harvest for the period was 87.5% of the license #5 total softwood allocation. The highest harvest level attained was 97% during the 1995 operating year. The pulpwood market dictated the stated under-allocation.

LICENSE: KENT #5

BASIC SILVICULTURE
(areas in hectares)

	Area Treated to Standard			
Year	Planting	Spacing	Total	Basic Requirement
1992-93	116.0	148.3	264.3	272
1993-94	0.0	166.8	166.8	272
1994-95	61.3	268.1	329.4	272
1995-96	46.5	594.1	640.6	272
1996-97	14.3	925.5	939.8	272
TOTAL	**238.1**	**2102.8**	**a) 2340.9**	**b) 1360.0**

Silviculture Effort = a ÷ b x 100 = 172.1%

Regional Comments:

1) The Licensee must be commended on its effort considering that the company was in receivership for a substantial portion of the evaluation period.

2) Hardwood spacing = 307.1 Ha.

Note: In comments section, please identify the total area of both softwood and hardwood spacing carried out during the period.

LICENSE: KENT #5

REMEDIAL TREATMENT OF PLANTATIONS
(areas in hectares)

Year of Establishment	Area Requiring Treatment		Treatable* Area		Actual Area Treated To Standard
1983	101.0		101.0		0.0
1984	56.0		56.0		0.0
1985	157.0		116.0		0.0
1986	20.0		20.0		0.0
1987	0.0		0.0		0.0
1988	0.0		0.0		0.0
1989	0.0		0.0		0.0
1990	25.0		25.0		0.0
TOTAL		**a)**	**318.0**	**b)**	**0.0**

Performance Measure = b ÷ a x 100 = 0.0%

* Area determined suitable for treatment prior to March 31, 1997.

Regional Comments:

The company holding the Kent License spent a substantial portion of the 5-Year Period in receivership, thus probably affecting the remedial action accomplished.

The "area requiring treatment" and "treatable area" columns are equal due to actual DNRE field assessments of the "failed" and "check" fifth year assessments categories for plantations.

LICENSE: KENT #5

FISH HABITAT PROTECTION

Year		Number of Watercourse Crossings Installed*		Number of Watercourse Crossings Where Monetary Penalties Were Incurred
1992-93		2		-
1993-94		5		-
1994-95**		7		-
1995-96		11		1
1996-97		19		1
TOTAL	a)	44	b)	2

Performance Measure = (1-(b ÷ a)) x 100 = 96%

* Applies to all natural watercourses

** Includes from 1994 to March 31/97 all watercourse crossings installed by Sub-licensees that were under the supervision of the Licensee during the period.

Regional Comments:

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LICENSE: KENT #5

WILDLIFE HABITAT MANAGEMENT

1. Component: Harvesting Without Approval

Year		Number Of Blocks In Or Directly Adjacent To *Site-Specific Wildlife Habitats		Number Of Blocks In Or Directly Adjacent To Site Specific Habitats In Which Penalties Were Applied For Harvesting Without Approval In The Site Specific Habitat
1992-93		15		—
1993-94		12		—
1994-95		12		—
1995-96		17		—
1996-97		17		—
TOTAL	a)	73	b)	0

Performance Measure = (1-(b ÷ a)) x 100 = 100%

Note: * As defined on page 14 of the Licensee Performance Evaluation document (July 1993)

Regional Comments:

1994-1997 includes sub-licensee harvest.

There was one penalty to Doane Raymond in 1992 but this doesn't count against Eagle Forest Products management of the License.

Most site specific wildlife habitats are buffers that had adjacent harvests.

LICENSE: KENT #5

WILDLIFE HABITAT MANAGEMENT

2. Component: Not Following Approved Harvest Prescription

Year	Number of Blocks In Site-Specific Wildlife Habitats		Number Of Blocks In Site-Specific Habitats Which Penalties Were Applied For Not Following Prescription	
1992-93	—			—
1993-94	—			—
1994-95	—			—
1995-96	—			—
1996-98	—			—
TOTAL	a)	0	b)	0

Performance Measure = (1-(b ÷ a)) x 100 = Not Applicable

Regional Comments:

The Licensee did not propose harvesting in any site-specific wildlife habitats during the Period.

LICENSE: KENT #5

WILDLIFE HABITAT MANAGEMENT

3. Component: Submission and Implementation of DWAMU Management Plans for Period I

Year	Area Of DWAMU Management Identified For Period I (92-97)		Area of DWAMU For Which Management Plans Were Submitted And Implemented in Period I (92-97)	
1992-97	----			---
TOTAL	a)	0	b)	0

Performance Measure = (b ÷ a)) x 100 = Not Applicable

Regional Comments:

As they were in receivership from 1992-1994, no management plan was submitted.

STANDARDS FOR ACCEPTANCE OF MANAGEMENT PLANS
LICENSE: Queens-Charlotte (06)

The forest management planning process is comprised of two phases:
1) the evaluation of management alternatives for the purpose of selecting an appropriate strategy; and,
2) geographic layout of that strategy for the purpose of implementation.

Both phases must be satisfactorily performed for the Licensees' plan to be deemed acceptable.

Phase 1 of the planning effort will be deemed acceptable if all the following steps are performed[1].

1. The Licensee provides the following resource information:	Yes	No
a. Permanent sample plot data	⊗	O
b. 5th year survey data	⊗	O
c. Annual reports	⊗	O
d. Pre-82 survey data	⊗	O
e. Maps of operationally inaccessible areas	⊗	O

Comments:

2. Stand level forecasts are made using DNRE approved models for the following stand conditions:		
a. Managed	⊗	O
b. Natural cutovers	⊗	O
c. Even-aged merchantable (clearcut and 2-pass)	⊗	O
d. Uneven-aged suitable for selection harvest (hardwood and softwood types)	⊗	O

[1] For details on the criteria listed here, refer to the document entitled "A vision for New Brunswick Forests, Goals and Objectives for Crown Land Management, 1994".

LICENSE: Queens-Charlotte (06)

e. Pre/post cut transition ..... ⊗ ○

Comments:

3. Stand development is characterized by the following parameters: Yes No

a. Volume by species ..... ⊗ ○

b. Mean piece-size ..... ⊗ ○

c. Log content to 15 cm top ..... ⊗ ○

d. Percent softwood by volume ..... ⊗ ○

e. Limits to operability ..... ⊗ ○

f. Time frame of suitability for deer winter cover ..... ⊗ ○

g. Time frame of suitability as mature softwood habitat ..... ⊗ ○

Comments:

4. Each stand on the License is characterized for the following conditions:

(i) Biological:

a. Species composition ..... ⊗ ○

b. Growth rate ..... ⊗ ○

c. Site quality ..... ⊗ ○

d. Harvest transition ..... ⊗ ○

e. Suitability for 2 pass even-aged ..... ⊗ ○

LICENSE: Queens-Charlotte (06)

	Yes	No
f. Suitability for uneven aged cutting cycle	⊗	○
g. Suitability for silviculture (i.e., planting, spacing and commercial thinning)	⊗	○
(ii) Physical:		
a. Operationally inaccessible	⊗	○
b. Riparian buffer	⊗	○
c. Legal Reserve	⊗	○
d. Deer Wintering Area Management Units	⊗	○

Comments:

5. A computer readable file of the classification results determined in Item 4 above is supplied to the Department. ⊗ ○

Comments:

6. DNRE approved forest level models are employed to analyse even and uneven aged management for the stand types determined in Item 4 above. ⊗ ○

LICENSE: Queens-Charlotte (06)

Comments:

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7. Forest level analyses are performed which explicitly include the following biologically feasible range of inputs:

	Yes	No
(i) Silviculture		
a. Planting - amount, priority criteria, and species	⊗	○
b. Spacing - amount and priority criteria	⊗	○
c. Commercial thinning - amount and priority criteria	⊗	○
(ii) Harvest		
a. Clear-cut - amount and priority criteria	⊗	○
b. 2-pass partial cut - amount, priority criteria and type	⊗	○
c. Selection (uneven-aged) - amount, priority criteria and type	⊗	○

Comments:

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8. Forest level results for each combination of inputs listed in Item 7 above are expressed by period for each of the following indicators:

	Yes	No
(i) Timber		
a. Sustainable fibre supply and volume by source and harvest method	⊗	○

LICENSE: Queens-Charlotte (06)

		Yes	No
b.	Log supply for current specifications	⊗	○
c.	Mean tree size profile	⊗	○
d.	Fallout species profile	⊗	○
e.	Silviculture costs N/A	○	○

(ii) Mature Coniferous Forest Habitat		Yes	No
a.	Net MCFH Objective identified	⊗	○
b.	Net MCFH Objective met for periods 1 through 7	⊗	○
c.	MCFH Blocks meet composition and spatial criteria	⊗	○
d.	MCFH/DWA overlap factored into block projections (if overlap is significant)	⊗	○
e.	MCFH Block summary sheets provide information as in "Mock Plan" appendix 7	○	⊗
f.	Period 1 timber harvest estimates provided	⊗	○
g.	MCFH Block stand-level class files provided	⊗	○
h.	MCFH Block stand files provided	⊗	○
i.	MCFH Blocks delinated on management plan map	⊗	○
j.	Gross MCFH Objective calculated	⊗	○
k.	Gross MCFH Objective met for periods 8 through 16	⊗	○
l.	MCFH management proposal accepted	⊗	○

Comments:

d. Original submission projected DWA/MCFH overlap with priority on MCFH instead of DWA. This was adjusted.

e. Individual timber supply analyses for each MCFH were not required due to harvesting in MCFH areas being limited to non-habitat stands. Habitat supply analysis should be the same as the "no harvest" runs.

(iii) Deer Wintering Areas	Yes	No
a. Group 1 DWA management summarized (i.e. 1993-97 DWA Mgmt Plans).	⊗	○
b. Group 2 DWA management scenarios (1997+) presented	⊗	○
c. Period 1 DWA area identified (i.e. for P1 DWA Mgmt Plan development).	⊗	○
d. Period 1 timber harvest estimates provided.	⊗	○
e. FORMAN files and environments provided.	○	⊗
f. DWA boundaries delineated on management plan maps.	⊗	○
g. DCWH supply and management proposal accepted.	⊗	○

Comments:

(a & b) Group 1 & 2 DWAMU information not in original submission. Provided upon DNRE request.

(e) Foreman class files provided were not stand level based and did not contain a field for DWAMU # identifier.

(iv) Watercourse Buffer Zones	Yes	No
a. Buffer widths by feature presented.	⊗	○
b. Potential for timber harvest investigated	⊗	○
c. Buffer harvest prescriptions described	⊗	○
d. Period 1 timber harvest estimates provided	⊗	○
e. Buffer management proposal accepted	⊗	○

9. The Licensee's first non-spatial submission of the management plan met minimum standards as defined in the document entitled "A vision for New Brunswick Forests Goals and Objectives for Crown Land Management" (1994) .. ⊗ ○

Comments:

LICENSE: Queens-Charlotte (06)

Phase 2. The geographic lay-out for strategy implementation, will be deemed acceptable if Licensee:

1. Lays out and characterizes the harvest schedule for a minimum of 25 years (or until such time as the point of minimum softwood growing stock is reached up to a maximum of 35 years), describing the harvest schedule as follows:

	Yes	No
(i) Harvest Block File:		
a. Region	⊗	○
b. License	⊗	○
c. Block #	⊗	○
d. Map #	⊗	○
e. Area (ha)	⊗	○
f. Type of harvest	⊗	○
g. Deer Wintering Area Management Unit Number	⊗	○
h. Supply run (SW or HW)	⊗	○
i. Harvest volume of species group (by period)	⊗	○
j. List of adjacent block numbers	N/A ○	○
(ii) Harvest Stand File:		
a. Map #	⊗	○
b. Stand #	⊗	○
c. Block #	⊗	○
d. Area in block	⊗	○
e. Harvest volume by species group (by period)	⊗	○

Comments:

LICENSE: Queens-Charlotte (06)

		Yes	No
2.	Identifies spacing and commercial thinning areas for the first 5 years	⊗	○

Comments:

Licensee not required to block spacing area. This is identified yearly at the operating plan level.

3.	Sequences blocks for harvest based on the following criteria:		
	a. A minimum harvest delay of 2 periods between adjacent harvest blocks which comprise a total area exceeding a maximum opening of 100 ha	⊗	○
	b. The distribution of harvest types by period approved in Phase 1 of the management plan	⊗	○

Comments:

		Item 8 above	
4.	Describes the impact of the mapped strategy for all indicators listed in Phase 1, ...	⊗	○

Comments:

Execution of the two phases of the management planning process must be performed in sequence and evaluation of both steps will be made upon submission of each phase as they are completed. The management alternatives (Phase 1) will be submitted and an appropriate strategy selected prior to proceeding with geographic layout (Phase 2). If both phases are accepted, the Licensee management planning performance will be acceptable in the context of the Performance Evaluation criteria.

LICENSE: Queens-Charlotte (06)

HARVEST SCHEDULE
(volumes in m^3)

Year	Softwood* Volume Harvested From Period 1 Blocks	Total Softwood* Volume Harvested
1993-94	549,996	549,996
1994-95	532,734	532,734
1995-96	443,281	443,281
1996-97	556,731	556,731
1997-98 **	567,500	567,500
TOTAL	a) 2,650,242	b) 2,650,242

Performance Measure = a ÷ b x 100 = 100 %

* Spruce, Fir, Jack Pine
** Proposed in 1997-98 Operating Plan

Regional Comments:

- All harvesting occurred in period 1 harvest blocks, approved by DNRE in the Annual Operating Plan.
- Softwood harvest volume (92-93)-(96-97) 2,717,075m^3
- Softwood allocation (92-93) - (96-97) 2,768,000m^3
- % softwood harvest vs softwood allocation: 98.2%

LICENSE: Queens-Charlotte (06)

BASIC SILVICULTURE
(areas in hectares)

Year	Area Treated to Standard			Basic Requirement
	Planting	Spacing	Total	
1992-93	1490	1771	3261	3335
1993-94	1551	1666	3217	3300
1994-95	1497	2394	3891	3300
1995-96	2547	5386	7933	3300
1996-97	2506	6520	9026	3300
TOTAL			a) 27,328	b) 16,535

Silviculture Effort = a ÷ b x 100 = 165.3 %

Regional Comments:

Basic silviculture is softwood oriented. In addition to the above, 51 ha of planting and 331 ha of thinning were done in DWAMU's. Total softwood silviculture for the period is 27,710 ha. Total hardwood silviculture (thinning) is 2,068 ha.

Note: In comments section, please identify the total area of both softwood and hardwood spacing carried out during the period.

LICENSE: Queens-Charlotte (06)

REMEDIAL TREATMENT OF PLANTATIONS
(areas in hectares)

Year of Establishment	Area Requiring Treatment	Treatable* Area	Actual Area Treated To Standard
1983	316	316	118
1984	735	735	-
1985	1309	1234	270
1986	630	560	-
1987	795	776	-
1988	110	95	15
1989	224	209	-
1990	492	166	-
TOTAL		a) 4091	b) 403

Performance Measure = b ÷ a x 100 = 9.9 %

* Area determined suitable for treatment prior to March 31, 1997.

Regional Comments:

LICENSE: Queens-Charlotte (06)

FISH HABITAT PROTECTION

Year	Number of Watercourse Crossings Installed*	Number of Watercourse Crossings Where Monetary Penalties Were Incurred
1992-93	73	3
1993-94	68	1
1994-95**	79	-
1995-96	71	-
1996-97	78	1
TOTAL	a) 369	b) 5

Performance Measure = (1-(b ÷ a)) x 100 = 98.6 %

* Applies to all natural watercourses
** Includes from 1994 to March 31/97 all watercourse crossings installed by Sub-licensees that were under the supervision of the Licensee during the period.

Regional Comments:

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LICENSE: Queens Charlotte (06)

WILDLIFE HABITAT MANAGEMENT

1. Component: Harvesting Without Approval

Year		Number of Blocks In Or Directly Adjacent To *Site-Specific Wildlife Habitats		Number of Blocks In Or Directly Adjacent To Site Specific Habitats In Which Penalties Were Applied For Harvesting Without Approval In The Site Specific Habitat
1992-93		100		-
1993-94		92		-
1994-95		97		1
1995-96		112		1
1996-97		157		1
TOTAL	a)	558	b)	3

Performance Measure = (1-(b + a)) x 100 = 99.5 %

Note: * As defined on page 14 of the Licensee Performance Evaluation document (July 1993)

Regional Comments:

LICENSE: Queens-Charlotte (06)

WILDLIFE HABITAT MANAGEMENT

2. Component: Not Following Approved Harvest Prescription

Year		Number of Blocks In Site-Specific Wildlife Habitats		Number of Blocks In Site-Specific Habitats Which Penalties Were Applied For Not Following Prescription
1992-93		25		-
1993-94		8		-
1994-95		20		-
1995-96		12		-
1996-97		38		-
TOTAL	a)	103	b)	-

Performance Measure = (1-(b + a)) x 100 = 100 %

Regional Comments:

LICENSE: Queens-Charlotte (06)

WILDLIFE HABITAT MANAGEMENT

3. Component: Submission and Implementation of DWAMU Management Plans for Period I

Year	Area of DWAMU Management Identified for Period I (92-97)	Area of DWAMU For Which Management Plans Were Submitted And Implemented In Period I (92-97)
1992-97		
TOTAL	a) 16,934 ha*	b) 4,828 ha

Performance Measure = $\frac{(b \div a) \times 100}{}$ = 28.5 %

Regional Comments:

* This figure represents class 1 DWAMU identified in class files for period 1 intervention.

Doc: harvest.tbl

STANDARDS FOR ACCEPTANCE OF MANAGEMENT PLANS
LICENSE: Fundy (07)

The forest management planning process is comprised of two phases:
1) the evaluation of management alternatives for the purpose of selecting an appropriate strategy; and,
2) geographic layout of that strategy for the purpose of implementation.

Both phases must be satisfactorily performed for the Licensees' plan to be deemed acceptable.

Phase 1 of the planning effort will be deemed acceptable if all the following steps are performed[1].

1. The Licensee provides the following resource information:	Yes	No
a. Permanent sample plot data	⊗	○
b. 5th year survey data	⊗	○
c. Annual reports	⊗	○
d. Pre-82 survey data	⊗	○
e. Maps of operationally inaccessible areas	⊗	○

Comments:

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2. Stand level forecasts are made using DNRE approved models for the following stand conditions:		
a. Managed	⊗	○
b. Natural cutovers	⊗	○
c. Even-aged merchantable (clearcut and 2-pass)	⊗	○
d. Uneven-aged suitable for selection harvest (hardwood and softwood types)	⊗	○

[1] For details on the criteria listed here, refer to the document entitled "A vision for New Brunswick Forests, Goals and Objectives for Crown Land Management, 1994".

e. Pre/post cut transition ..... ⊗ ○

Comments:

3. Stand development is characterized by the following parameters: Yes No

a. Volume by species ..... ⊗ ○

b. Mean piece-size ..... ⊗ ○

c. Log content to 15 cm top ..... ⊗ ○

d. Percent softwood by volume ..... ⊗ ○

e. Limits to operability ..... ⊗ ○

f. Time frame of suitability for deer winter cover ..... ⊗ ○

g. Time frame of suitability as mature softwood habitat ..... ⊗ ○

Comments:

4. Each stand on the License is characterized for the following conditions:

(i) Biological:

a. Species composition ..... ⊗ ○

b. Growth rate ..... ⊗ ○

c. Site quality ..... ⊗ ○

d. Harvest transition ..... ⊗ ○

e. Suitability for 2 pass even-aged ..... ⊗ ○

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	Yes	No
f. Suitability for uneven aged cutting cycle	⊗	○
g. Suitability for silviculture (i.e., planting, spacing and commercial thinning)	⊗	○
(ii) Physical:		
a. Operationally inaccessible	⊗	○
b. Riparian buffer	⊗	○
c. Legal Reserve	⊗	○
d. Deer Wintering Area Management Units	⊗	○

Comments:

5. A computer readable file of the classification results determined in Item 4 above is supplied to the Department. ⊗ ○

Comments:

6. DNRE approved forest level models are employed to analyse even and uneven aged management for the stand types determined in Item 4 above. ⊗ ○

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Comments:

7. Forest level analyses are performed which explicitly include the following biologically feasible range of inputs:

(i) Silviculture	Yes	No
a. Planting - amount, priority criteria, and species	⊗	○
b. Spacing - amount and priority criteria	⊗	○
c. Commercial thinning - amount and priority criteria	⊗	○
(ii) Harvest		
a. Clear-cut - amount and priority criteria	⊗	○
b. 2-pass partial cut - amount, priority criteria and type	⊗	○
c. Selection (uneven-aged) - amount, priority criteria and type	⊗	○

Comments:

8. Forest level results for each combination of inputs listed in Item 7 above are expressed by period for each of the following indicators:

	Yes	No
(i) Timber		
a. Sustainable fibre supply and volume by source and harvest method	⊗	○

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		Yes	No
b.	Log supply for current specifications	⊗	○
c.	Mean tree size profile	⊗	○
d.	Fallout species profile	⊗	○
e.	Silviculture costs N/A	○	○

(ii) Mature Coniferous Forest Habitat		Yes	No
a.	Net MCFH Objective identified	⊗	○
b.	Net MCFH Objective met for periods 1 through 7	⊗	○
c.	MCFH Blocks meet composition and spatial criteria	⊗	○
d.	MCFH/DWA overlap factored into block projections (if overlap is significant)	⊗	○
e.	MCFH Block summary sheets provide information as in "Mock Plan" appendix 7	○	⊗
f.	Period 1 timber harvest estimates provided	⊗	○
g.	MCFH Block stand-level class files provided	⊗	○
h.	MCFH Block stand files provided	⊗	○
i.	MCFH Blocks delinated on management plan map	⊗	○
j.	Gross MCFH Objective calculated	⊗	○
k.	Gross MCFH Objective met for periods 8 through 16	⊗	○
l.	MCFH management proposal accepted	⊗	○

Comments:

c. DNRE concerns on composition and spatial criteria of MCFH blocks have been documented and identified to J. D. Irving Limited. The blocks are accepted for this plan.

d. Original submission projected DWA/MCFH overlap with priority on MCFH instead of DWA. This was adjusted.

e. Individual timber supply analyses for each MCFH were not required due to harvesting in MCFH areas being limited to non-habitat stands. Habitat supply analysis should be the same as the "no-harvest" runs.

g. Original submission lacked stand level class files. They were provided upon DNRE request. Note: class file contained a stand numbering system incompatible with DNRE database.

(iii) Deer Wintering Areas	Yes	No
a. Group 1 DWA management summarized (i.e. 1993-97 DWA Mgmt Plans).	⊗	○
b. Group 2 DWA management scenarios (1997+) presented	⊗	○
c. Period 1 DWA area identified (i.e. for P1 DWA Mgmt Plan development).	⊗	○
d. Period 1 timber harvest estimates provided.	⊗	○
e. FORMAN files and environments provided.	○	⊗
f. DWA boundaries delineated on management plan maps.	⊗	○
g. DCWH supply and management proposal accepted.	⊗	○

Comments:

(a & b) Group 1 & 2 DWAMU information not in original submission. Provided upon DNRE request.

(e) Foreman class files provided were not stand level based and did not contain a field for DWAMU identifier.

(iv) Watercourse Buffer Zones	Yes	No
a. Buffer widths by feature presented.	⊗	○
b. Potential for timber harvest investigated	⊗	○
c. Buffer harvest prescriptions described	⊗	○
d. Period 1 timber harvest estimates provided	⊗	○
e. Buffer management proposal accepted	⊗	○

9. The Licensee's first non-spatial submission of the management plan met minimum standards as defined in the document entitled "A vision for New Brunswick Forests Goals and Objectives for Crown Land Management" (1994) .. ⊗ ○

Comments:

LICENSE: Fundy (07)

Phase 2. The geographic lay-out for strategy implementation, will be deemed acceptable if Licensee:

1. Lays out and characterizes the harvest schedule for a minimum of 25 years (or until such time as the point of minimum softwood growing stock is reached up to a maximum of 35 years), describing the harvest schedule as follows:

	Yes	No
(i) Harvest Block File:		
a. Region	⊗	○
b. License	⊗	○
c. Block #	⊗	○
d. Map #	⊗	○
e. Area (ha)	⊗	○
f. Type of harvest	⊗	○
g. Deer Wintering Area Management Unit Number	⊗	○
h. Supply run (SW or HW)	⊗	○
i. Harvest volume of species group (by period)	⊗	○
j. List of adjacent block numbers	N/A ○	○
(ii) Harvest Stand File:		
a. Map #	⊗	○
b. Stand #	⊗	○
c. Block #	⊗	○
d. Area in block	⊗	○
e. Harvest volume by species group (by period)	⊗	○

Comments:

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		Yes	No
2.	Identifies spacing and commercial thinning areas for the first 5 years	⊗	○

Comments:

Licensee not required to block spacing area. This is identified yearly at the operating plan level.

3.	Sequences blocks for harvest based on the following criteria:		
	a. A minimum harvest delay of 2 periods between adjacent harvest blocks which comprise a total area exceeding a maximum opening of 100 ha	⊗	○
	b. The distribution of harvest types by period approved in Phase 1 of the management plan	⊗	○

Comments:

		Item 8 above	
4.	Describes the impact of the mapped strategy for all indicators listed in Phase 1, ...	⊗	○

Comments:

Execution of the two phases of the management planning process must be performed in sequence and evaluation of both steps will be made upon submission of each phase as they are completed. The management alternatives (Phase 1) will be submitted and an appropriate strategy selected prior to proceeding with geographic layout (Phase 2). If both phases are accepted, the Licensee management planning performance will be acceptable in the context of the Performance Evaluation criteria.

LICENSE: Fundy (07)

HARVEST SCHEDULE
(volumes in m^3)

Year	Softwood* Volume Harvested From Period 1 Blocks	Total Softwood* Volume Harvested
1993-94	288,715	288,715
1994-95	277,664	277,664
1995-96	232,235	232,235
1996-97	283,268	283,268
1997-98 **	331,500	331,500
TOTAL	a) 1,413,382	b) 1,413,382

Performance Measure = a ÷ b x 100 = 100 %

* Spruce, Fir, Jack Pine
** Proposed in 1997-98 Operating Plan

Regional Comments:

- Harvesting occurred only in approved harvest blocks; therefore all volume is period 1 wood.
- Softwood harvest volume (92-93) - (96-97): 1,601,298m^3
- Softwood allocation (92-93) - (96-97): 1,551,000m^3
- % softwood harvest vs softwood allocation: 103.2%

LICENSE: Fundy (07)

BASIC SILVICULTURE
(areas in hectares)

Year	Area Treated to Standard			Basic Requirement
	Planting	Spacing	Total	
1992-93	1059	909	1968	1900
1993-94	833	1428	2261	2200
1994-95	983	1959	2942	2200
1995-96	1357	3639	4996	2200
1996-97	1272	2706	3978	2200
TOTAL			a)16,145	b) 10,700

Silviculture Effort = a ÷ b x 100 = 150.9 %

Regional Comments:

Basic silviculture is softwood oriented. In addtition to the above, 86 ha of planting and 147 ha of thinning were done in DWAMU's. Total softwood silviculture for the period is 16,378 ha. Total hardwood silviculture (thinning) is 1,650ha.

Note: In comments section, please identify the total area of both softwood and hardwood spacing carried out during the period.

LICENSE: Fundy (07)

REMEDIAL TREATMENT OF PLANTATIONS
(areas in hectares)

Year of Establishment	Area Requiring Treatment	Treatable* Area	Actual Area Treated To Standard
1983	599	599	79
1984	249	249	-
1985	246	200	9
1986	147	140	-
1987	335	323	-
1988	191	161	-
1989	113	110	-
1990	311	-	-
TOTAL		a) 1782	b) 88

Performance Measure = b ÷ a x 100 = 4.9 %

* Area determined suitable for treatment prior to March 31, 1997.

Regional Comments:

LICENSE: Fundy 07

FISH HABITAT PROTECTION

Year	Number of Watercourse Crossings Installed*	Number of Watercourse Crossings Where Monetary Penalties Were Incurred
1992-93	48	1
1993-94	51	5
1994-95**	23	-
1995-96	10	-
1996-97	29	1
TOTAL	a) 161	b) 7

Performance Measure = (1-(b ÷ a)) x 100 = 95.7 %

* Applies to all natural watercourses

** Includes from 1994 to March 31/97 all watercourse crossings installed by Sub-licensees that were under the supervision of the Licensee during the period.

Regional Comments:

Penalties in 92-93 and 93-94 reflect Licensee operations only.

Reduced # of installation since 94-95 reflect reduced road building in Region 3 portion of License.

LICENSE: Fundy (07)

WILDLIFE HABITAT MANAGEMENT

1. Component: Harvesting Without Approval

Year		Number of Blocks In Or Directly Adjacent To *Site-Specific Wildlife Habitats		Number of Blocks In Or Directly Adjacent To Site Specific Habitats In Which Penalties Were Applied For Harvesting Without Approval In The Site Specific Habitat
1992-93		93		1
1993-94		75		2
1994-95		52		-
1995-96		59		-
1996-97		77		1
TOTAL	a)	356	b)	4

Performance Measure = (1-(b ÷ a)) x 100 = 98.9 %

Note: * As defined on page 14 of the Licensee Performance Evaluation document (July 1993)

Regional Comments:

-

LICENSE: Fundy (07)

WILDLIFE HABITAT MANAGEMENT

2. Component: Not Following Approved Harvest Prescription

Year	Number of Blocks In Site-Specific Wildlife Habitats	Number of Blocks In Site-Specific Habitats Which Penalties Were Applied For Not Following Prescription
1992-93	25	1
1993-94	10	-
1994-95	6	-
1995-96	11	-
1996-97	35	-
TOTAL	a) 87	b) 1

Performance Measure = (1-(b ÷ a)) x 100 = 98.9 %

Regional Comments:

LICENSE: Fundy (07)

WILDLIFE HABITAT MANAGEMENT

3. Component: Submission and Implementation of DWAMU Management Plans for Period I

Year	Area of DWAMU Management Identified for Period I (92-97)	Area of DWAMU For Which Management Plans Were Submitted And Implemented In Period I (92-97)
1992-97		
TOTAL	a) 15,486 ha*	b) 5,819 ha

Performance Measure = $\frac{(b \div a) \times 100}{}$ = 37.6 %

Regional Comments:

* This figure represents class 1 DWAMU identified in class files for period 1 intervention.

STANDARDS FOR ACCEPTANCE OF MANAGEMENT PLANS
LICENSE: 8 York

The forest management planning process is comprised of two phases:
1) the evaluation of management alternatives for the purpose of selecting an appropriate strategy; and,
2) geographic layout of that strategy for the purpose of implementation.

Both phases must be satisfactorily performed for the Licensees' plan to be deemed acceptable.

Phase 1 of the planning effort will be deemed acceptable if all the following steps are performed[1].

1. The Licensee provides the following resource information:	Yes	No
a. Permanent sample plot data	⊘	O
b. 5th year survey data	⊘	O
c. Annual reports	⊘	O
d. Pre-82 survey data	⊘	O
e. Maps of operationally inaccessible areas	⊘	O

Comments:

Performance satisfactory.

2. Stand level forecasts are made using DNRE approved models for the following stand conditions:		
a. Managed	⊘	O
b. Natural cutovers	⊘	O
c. Even-aged merchantable (clearcut and 2-pass)	⊘	O
d. Uneven-aged suitable for selection harvest (hardwood and softwood types)	⊘	O

[1] For details on the criteria listed here, refer to the document entitled "A vision for New Brunswick Forests, Goals and Objectives for Crown Land Management, 1994".

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e. Pre/post cut transition ..... ⊗ ○

Comments:

Performance satisfactory.

3. Stand development is characterized by the following parameters: Yes No

a. Volume by species ..... ⊗ ○

b. Mean piece-size ..... ⊗ ○ see note

c. Log content to 15 cm top ..... ⊗ ○

d. Percent softwood by volume ..... ⊗ ○

e. Limits to operability ..... ⊗ ○

f. Time frame of suitability for deer winter cover ..... ⊗ ○

g. Time frame of suitability as mature softwood habitat ..... ⊗ ○

Comments:

General note: FORMAN uses "classes" which typically are aggregations of "stands". By linking the original class assignment file (which assigns all stands to classes) to the required FORMAN files, stand level information could be obtained.

4. Each stand on the License is characterized for the following conditions:

(i) Biological:

a. Species composition ..... ⊗ ○

b. Growth rate ..... ⊗ ○

c. Site quality ..... ⊗ ○ see notes

d. Harvest transition ..... ⊗ ○

e. Suitability for 2 pass even-aged ..... ⊗ ○

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	Yes	No
f. Suitability for uneven aged cutting cycle	⊗	O
g. Suitability for silviculture (i.e., planting, spacing and commercial thinning)	⊗	O
(ii) Physical:		
a. Operationally inaccessible	⊗	O
b. Riparian buffer	⊗	O
c. Legal Reserve	⊗	O
d. Deer Wintering Area Management Units	⊗	O

Comments:

Section 4 Part C - Although site quality was identified and used as a characterization criterion, not much variation was noted. The licensee separated each class group into sites 1, 2 and 3, and assigned each subgroup to a unique curve.

5. A computer readable file of the classification results determined in Item 4 above is supplied to the Department. ⊗ O

Comments:

Performance satisfactory.

6. DNRE approved forest level models are employed to analyse even and uneven aged management for the stand types determined in Item 4 above. ⊗ O

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Comments:

Performance satisfactory.

7. Forest level analyses are performed which explicitly include the following biologically feasible range of inputs:

	Yes	No
(i) Silviculture		
a. Planting - amount, priority criteria, and species	⊗	○
b. Spacing - amount and priority criteria	⊗	○
c. Commercial thinning - amount and priority criteria	⊗	○ see not
(ii) Harvest		
a. Clear-cut - amount and priority criteria	⊗	○
b. 2-pass partial cut - amount, priority criteria and type	⊗	○
c. Selection (uneven-aged) - amount, priority criteria and type	⊗	○

Comments:

Part C - commercial thinning was initially explored and rejected by the licensee as a viable treatment. This was approved at the regional level.

8. Forest level results for each combination of inputs listed in Item 7 above are expressed by period for each of the following indicators:

	Yes	No
(i) Timber		
a. Sustainable fibre supply and volume by source and harvest method	⊗	○

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		Yes	No
b.	Log supply for current specifications	X	O
c.	Mean tree size profile	X	O
d.	Fallout species profile	X	O
e.	Silviculture costs	N/A O	O

(ii) Mature Coniferous Forest Habitat		Yes	No
a.	Net MCFH Objective identified	X	O
b.	Net MCFH Objective met for periods 1 through 7	X	O
c.	MCFH Blocks meet composition and spatial criteria	X	O
d.	MCFH/DWA overlap factored into block projections (if overlap is significant)	X	O
e.	MCFH Block summary sheets provide information as in "Mock Plan" appendix 7	X	O
f.	Period 1 timber harvest estimates provided	X	O
g.	MCFH Block stand-level class files provided	X	O
h.	MCFH Block stand files provided	X	O
i.	MCFH Blocks delinated on management plan map	X	O
j.	Gross MCFH Objective calculated	X	O
k.	Gross MCFH Objective met for periods 8 through 16	X	O
l.	MCFH management proposal accepted	X	O

Comments:

Section 8 (ii) g-h- class files were provided. If necessary class assignment files to FORMAN files would provide necessary information.

(iii) Deer Wintering Areas	Yes	No see notes
a. Group 1 DWA management summarized (i.e. 1993-97 DWA Mgmt Plans).	⊗	○
b. Group 2 DWA management scenarios (1997+) presented	⊗	○
c. Period 1 DWA area identified (i.e. for P1 DWA Mgmt Plan development).	⊗	○
d. Period 1 timber harvest estimates provided.	⊗	○
e. FORMAN files and environments provided.	⊗	○
f. DWA boundaries delineated on management plan maps.	⊗	○
g. DCWH supply and management proposal accepted.	⊗	○

Comments:

(iii) Deer Wintering Areas - The approved period 1 DWA plan development list changed as our method of defining priority DWAMU's evolved. The licensee complied with this change.

(iv) Watercourse Buffer Zones	Yes	No
a. Buffer widths by feature presented.	⊗	○
b. Potential for timber harvest investigated	⊗	○
c. Buffer harvest prescriptions described	⊗	○
d. Period 1 timber harvest estimates provided	⊗	○
e. Buffer management proposal accepted	⊗	○

9. The Licensee's first non-spatial submission of the management plan met minimum standards as defined in the document entitled "A vision for New Brunswick Forests Goals and Objectives for Crown Land Management" (1994) .. .. ⊗ ○

Comments:

Performance satisfactory.

Phase 2. The geographic lay-out for strategy implementation, will be deemed acceptable if Licensee:

LICENSE: 8 - York

1. Lays out and characterizes the harvest schedule for a minimum of 25 years (or until such time as the point of minimum softwood growing stock is reached up to a maximum of 35 years), describing the harvest schedule as follows:

	Yes	No see notes
(i) Harvest Block File:		
a. Region	☒	○
b. License	☒	○
c. Block #	☒	○
d. Map #	☒	○
e. Area (ha)	☒	○
f. Type of harvest	☒	○
g. Deer Wintering Area Management Unit Number	☒	○
h. Supply run (SW or HW)	☒	○
i. Harvest volume of species group (by period)	☒	○
j. List of adjacent block numbers	☒	○
(ii) Harvest Stand File:		
a. Map #	☒	○
b. Stand #	☒	○
c. Block #	☒	○
d. Area in block	☒	○
e. Harvest volume by species group (by period)	☒	○

Comments:

Section 1(i) a-j and (ii)a-e - For the management plan, the licensee provided DNRE with block maps (GIS technology was not available). DNRE digitized the blocks into our GIS then produced output files from which the summaries noted on Pg.7 could be made.

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		Yes	No
2.	Identifies spacing and commercial thinning areas for the first 5 years	x	o

Comments:

Licennsee not required to block spacing area, will be identified yearly at the operating plan level.

Performance satisfactory.

3. Sequences blocks for harvest based on the following criteria:

a.	A minimum harvest delay of 2 periods between adjacent harvest blocks which comprise a total area exceeding a maximum opening of 100 ha	x	o
b.	The distribution of harvest types by period approved in Phase 1 of the management plan	x	o

Comments:

On specific cases licensee accomodated potential opening size conflicts against private ownerships by rescheduling or reshaping individual blocks approved in the 1992 management plan.

		Item 8 above	
4.	Describes the impact of the mapped strategy for all indicators listed in Phase 1, ...	x	o

Comments:

Performance satisfactory.

Execution of the two phases of the management planning process must be performed in sequence and evaluation of both steps will be made upon submission of each phase as they are completed. The management alternatives (Phase 1) will be submitted and an appropriate strategy selected prior to proceeding with geographic layout (Phase 2). If both phases are accepted, the Licensee management planning performance will be acceptable in the context of the Performance Evaluation criteria.

LICENSE: 8 - York

HARVEST SCHEDULE
(volumes in m^3)

Year	Softwood* Volume Harvested From Period 1 Blocks	Total Softwood* Volume Harvested
1993-94	155,493 m^3	155,513 m^3
1994-95	130,500 m^3	130,500 m^3
1995-96	151,625 m^3	151,625 m^3
1996-97	120,978 m^3	120,978 m^3
1997-98 **	114,013 m^3	114,013 m^3
TOTAL	a) 672,609 m^3	b) 672,629 m^3

Performance Measure = a ÷ b x 100 = 100 %

* Spruce, Fir, Jack Pine
** Proposed in 1997-98 Operating Plan

Regional Comments:

Volumes include total softwood volume that was harvested from the license.

This licensee did not harvest outside the approved ammended management plan.

The percent of softwood allocation for license 8 over the period 92-96 is 94%.

LICENSE: 8 - York

BASIC SILVICULTURE *
(areas in hectares)

Year	Area Treated to Standard			Basic Requirement
	Planting	Spacing	Total	
1992-93	564 ha	616 ha	1180 ha	1500 ha
1993-94	391 ha	760 ha	1151 ha	1040 ha
1994-95	297 ha	834 ha**	1131 ha	1040 ha
1995-96	401 ha	1919 ha	2320 ha	1040 ha
1996-97	166 ha	1586 ha	1752 ha	1040 ha
TOTAL			a) 7534 ha	b) 5660 ha

Silviculture Effort = a ÷ b x 100 = 133 %

Regional Comments: Silviculture completed above Basic and Expanded programs.

1992-93 - all basic in 1992 - no DWAMU silviculture completed

1993-94 - DWAMU Plant = 78.3 ha; DWAMU spacing 6.6 ha

1994-95 - DWAMU Plant = 46.3; DWAMU spacing = 87.0 ha

1995-96 - DWAMU Plant = 22.3 ha; DWAMU spacing = 100.0 ha

1996-97 - DWAMU Plant = 0 ha; DWAMU spacing = 201.9 ha

The total area on license 8 for both softwood and hardwood spacing (all options) is: SWD = 4115 ha and HWD = 1996 ha.

Note: In comments section, please identify the total area of both softwood and hardwood spacing carried out during the period.

* Figures include basic and expanded programs.
** Figure includes 171.1 ha of Basic cleaning.

LICENSE: 8 - York

REMEDIAL TREATMENT OF PLANTATIONS
(areas in hectares)

Year of Establishment	Area Requiring Treatment	Treatable* Area	Actual Area Treated To Standard
1983	---	---	---
1984	---	---	---
1985	---	---	---
1986	106.2	64.5	64.5
1987	31.4	31.4	31.4
1988	117.0	0	0
1989	206**	0	0
1990	185**	0	0
TOTAL		a) 95.9 ha	b) 95.9

Performance Measure = b ÷ a x 100 = 100 %

* Area determined suitable for treatment prior to March 31, 1997.

Regional Comments:

** Area requiring treatment not finalized at Regional level - requires field checking. No treatable area available for 1989 and 1990 plantations.

LICENSE: 8 - York

FISH HABITAT PROTECTION

Year	Number of Watercourse Crossings Installed*	Number of Watercourse Crossings Where Monetary Penalties Were Incurred
1992-93	33+	0
1993-94	39+	0
1994-95**	32+	3 (all pen#25)
1995-96	42+	1 (pen.#25)
1996-97	21+	0
TOTAL	a) 167	b) 4

Performance Measure = (1-(b ÷ a)) x 100 = 98 %

* Applies to all natural watercourses
** Includes from 1994 to March 31/97 all watercourse crossings installed by Sub-licensees that were under the supervision of the Licensee during the period.

Regional Comments:

+ includes temporaries : 1992 = 0;1993 = 7;1994 = 8;1995 = 11; 1996 = 8

LICENSE: 8 - York

WILDLIFE HABITAT MANAGEMENT

1. Component: Harvesting Without Approval

Year	Number of Blocks In Or Directly Adjacent To *Site-Specific Wildlife Habitats	Number of Blocks In Or Directly Adjacent To Site Specific Habititats In Which Penalties Were Applied For Harvesting Without Approval In The Site Specific Habitat
1992-93	18	0
1993-94	28	0
1994-95	31	0
1995-96	33	0
1996-97	35	0
TOTAL	a) 145	b) 0

Performance Measure = (1-(b ÷ a)) x 100 = 100 %

Note: * As defined on page 14 of the Licensee Performance Evaluation document (July 1993)

Regional Comments:

This licensee is very conscientious when operating in or around site specific habitat. On specific occasions they have identified the need to establish moose calving buffers and travel corridors at the time of block layout.

LICENSE: 8 - York

WILDLIFE HABITAT MANAGEMENT

2. Component: Not Following Approved Harvest Prescription

Year	Number of Blocks In Site-Specific Wildlife Habitats	Number of Blocks In Site-Specific Habitats Which Penalties Were Applied For Not Following Prescription
1992-93	9	0
1993-94	6	0
1994-95	8	0
1995-96	11	0
1996-97	9	0
TOTAL	a) 43	b) 0

Performance Measure = (1-(b ÷ a)) x 100 = 100 %

Regional Comments:

Further breakdown of blocks: 1992 - 9 blocks = 26 patch cuts
1993 - 6 blocks = 15 patch cuts
1994 - 8 blocks = 15 patch cuts
1995 -11 blocks = 14 patch cuts
1996 - 9 blocks = 13 patch cuts

LICENSE: 8 - York

WILDLIFE HABITAT MANAGEMENT

3. Component: Submission and Implementation of DWAMU Management Plans for Period I

Year	Area of DWAMU Management Identified for Period I (92-97)		Area of DWAMU For Which Management Plans Were Submitted And Implemented In Period I (92-97)
1992-97	6790 ha		6790 ha
TOTAL	a) 6790 ha	b)	6790 ha

Performance Measure = (b ÷ a) x 100 = 100%

Regional Comments:

In 1994 the region re-evaluated the DWAMU landbase. There were changes (additions and deletions) made which impacted the original list submitted by the licensee. The above figure of 6,790 ha reflects the actual area of DWAMU landbase for Period I. All prioritized yards requiring Management Plans were cruised by DNRE and were developed by the Licensee. St. Anne has been proactive and cooperative in developing DWAMU plans. They have initiated their own cruising program and have submitted and additional 17 DWAMU Management Plans since August 1997 for approval.

STANDARDS FOR ACCEPTANCE OF MANAGEMENT PLANS

LICENSE: 9 -Carleton

The forest management planning process is comprised of two phases:

1) the evaluation of management alternatives for the purpose of selecting an appropriate strategy; and,
2) geographic layout of that strategy for the purpose of implementation.

Both phases must be satisfactorily performed for the Licensees' plan to be deemed acceptable.

Phase 1 of the planning effort will be deemed acceptable if all the following steps are performed[1].

1. The Licensee provides the following resource information:	Yes	No
a. Pemanent sample plot data	X	O
b. 5th year survey data	X	O
c. Annual reports	X	O
d. Pre-82 survey data	X	O
e. Maps of operationally inaccessible areas	X	O

Comments:

Performance satisfactory.

2. Stand level forecasts are made using DNRE approved models for the following stand conditions:		
a. Managed	X	O
b. Natural cutovers	X	O
c. Even-aged merchantable (clearcut and 2-pass)	X	O
d. Uneven-aged suitable for selection harvest (hardwood and softwood types)	X	O

[1] For details on the criteria listed here, refer to the document entitled "A vision for New Brunswick Forests, Goals and Objectives for Crown Land Management, 1994".

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e. Pre/post cut transition ..... ⊗ O

Comments:

Performance satisfactory.

3. Stand development is characterized by the following parameters: Yes No

a. Volume by species ..... ⊗ O

b. Mean piece-size ..... ⊗ O

c. Log content to 15 cm top ..... ⊗ O

d. Percent softwood by volume ..... ⊗ O see note

e. Limits to operability ..... ⊗ O

f. Time frame of suitability for deer winter cover ..... ⊗ O

g. Time frame of suitability as mature softwood habitat ..... ⊗ O

Comments:

FORMAN uses "classes" which typically are aggregations of "stands". By linking the original class assignment file (which assigns all stands to classes) to the required FORMAN files, stand level information could be obtained.

4. Each stand on the License is characterized for the following conditions:

(i) Biological:

a. Species composition ..... ⊗ O

b. Growth rate ..... ⊗ O

c. Site quality ..... ⊗ O see note

d. Harvest transition ..... ⊗ O

e. Suitability for 2 pass even-aged ..... ⊗ O

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	Yes	No
f. Suitability for uneven aged cutting cycle	⊗	○
g. Suitability for silviculture (i.e., planting, spacing and commercial thinning)	⊗	○
(ii) Physical:		
a. Operationally inaccessible	⊗	○
b. Riparian buffer	⊗	○
c. Legal Reserve	⊗	○
d. Deer Wintering Area Management Units	⊗	○

Comments:

4c.) Although site quality was identified and used as a characterization criterion, not much variation was noted. The licensee separated each class group into sites 1-3, and assigned each subgroup to a unique curve.

5. A computer readable file of the classification results determined in Item 4 above is supplied to the Department. ⊗ ○

Comments:

Performance satisfactory.

6. DNRE approved forest level models are employed to analyse even and uneven aged management for the stand types determined in Item 4 above. ⊗ ○

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Comments:

Performance satisfactory.

7. Forest level analyses are performed which explicitly include the following biologically feasible range of inputs:

(i) Silviculture	Yes	No
a. Planting - amount, priority criteria, and species	⊗	○
b. Spacing - amount and priority criteria	⊗	○
c. Commercial thinning - amount and priority criteria	⊗	○see not
(ii) Harvest		
a. Clear-cut - amount and priority criteria	⊗	○
b. 2-pass partial cut - amount, priority criteria and type	⊗	○
c. Selection (uneven-aged) - amount, priority criteria and type	⊗	○

Comments:

7.(i)c. - Commercial thinning was initially explored and and rejected by the licensee as a viable treatment. This was approved at the regional level.

8. Forest level results for each combination of inputs listed in Item 7 above are expressed by period for each of the following indicators:

	Yes	No
(i) Timber		
a. Sustainable fibre supply and volume by source and harvest method	⊗	○

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		Yes	No
b.	Log supply for current specifications	X	O
c.	Mean tree size profile	X	O
d.	Fallout species profile	X	O
e.	Silviculture costs	N/A O	O

(ii) Mature Coniferous Forest Habitat		Yes	No
a.	Net MCFH Objective identified	X	O
b.	Net MCFH Objective met for periods 1 through 7	X	O
c.	MCFH Blocks meet composition and spatial criteria	X	O
d.	MCFH/DWA overlap factored into block projections (if overlap is significant)	X	O
e.	MCFH Block summary sheets provide information as in "Mock Plan" appendix 7	X	O
f.	Period 1 timber harvest estimates provided	X	O
g.	MCFH Block stand-level class files provided	X	O
h.	MCFH Block stand files provided	X	O
i.	MCFH Blocks delinated on management plan map	X	O
j.	Gross MCFH Objective calculated	X	O
k.	Gross MCFH Objective met for periods 8 through 16	X	O
l.	MCFH management proposal accepted	X	O

Comments:

Section 8 (ii) g-h- class files were provided. If necessary class assignment files to FORMAN files would provide necessary information.

(iii) Deer Wintering Areas	Yes	No see notes
a. Group 1 DWA management summarized (i.e. 1993-97 DWA Mgmt Plans).	☒	○
b. Group 2 DWA management scenarios (1997+) presented	☒	○
c. Period 1 DWA area identified (i.e. for P1 DWA Mgmt Plan development).	☒	○
d. Period 1 timber harvest estimates provided.	☒	○
e. FORMAN files and environments provided.	☒	○
f. DWA boundaries delineated on management plan maps.	☒	○
g. DCWH supply and management proposal accepted.	☒	○

Comments:

The approved Period 1 DWA plan development list changed as our method of defining priority DWA's evolved. The licensee complied with this change.

(iv) Watercourse Buffer Zones	Yes	No
a. Buffer widths by feature presented.	☒	○
b. Potential for timber harvest investigated	☒	○
c. Buffer harvest prescriptions described	☒	○
d. Period 1 timber harvest estimates provided	☒	○
e. Buffer management proposal accepted	☒	○

9. The Licensee's first non-spatial submission of the management plan met minimum standards as defined in the document entitled "A vision for New Brunswick Forests Goals and Objectives for Crown Land Management" (1994) .. .. ☒ ○

Comments:

Phase 2. The geographic lay-out for strategy implementation, will be deemed acceptable if Licensee:

LICENSE: 9 - Carleton

1. Lays out and characterizes the harvest schedule for a minimum of 25 years (or until such time as the point of minimum softwood growing stock is reached up to a maximum of 35 years), describing the harvest schedule as follows:

	Yes	No see notes
(i) Harvest Block File:		
a. Region	⊗	O
b. License	⊗	O
c. Block #	⊗	O
d. Map #	⊗	O
e. Area (ha)	⊗	O
f. Type of harvest	⊗	O
g. Deer Wintering Area Management Unit Number	⊗	O
h. Supply run (SW or HW)	⊗	O
i. Harvest volume of species group (by period)	⊗	O
j. List of adjacent block numbers	⊗	O
(ii) Harvest Stand File:		
a. Map #	⊗	O
b. Stand #	⊗	O
c. Block #	⊗	O
d. Area in block	⊗	O
e. Harvest volume by species group (by period)	⊗	O

Comments:

1.i)a-j ii)a-e - For the management plan, the licensee provided DNRE with block maps (GIS technology was not available). DNRE digitized the blocks into our GIS and then produced output files from which the summaries noted on page 7 could be made.

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		Yes	No
2.	Identifies spacing and commercial thinning areas for the first 5 years	x	o

Comments:

Licennsee not required to block spacing area, will be identified yearly at the operating plan level.

Performance satisfactory.

		Yes	No
3.	Sequences blocks for harvest based on the following criteria:		
	a. A minimum harvest delay of 2 periods between adjacent harvest blocks which comprise a total area exceeding a maximum opening of 100 ha	x	o
	b. The distribution of harvest types by period approved in Phase 1 of the management plan	x	o

Comments:

Performance satisfactory.

		Item 8 above	
4.	Describes the impact of the mapped strategy for all indicators listed in Phase 1, ...	x	o

Comments:

Performance satisfactory.

Execution of the two phases of the management planning process must be performed in sequence and evaluation of both steps will be made upon submission of each phase as they are completed. The management alternatives (Phase 1) will be submitted and an appropriate strategy selected prior to proceeding with geographic layout (Phase 2). If both phases are accepted, the Licensee management planning performance will be acceptable in the context of the Performance Evaluation criteria.

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HARVEST SCHEDULE
(volumes in m^3)

Year	Softwood* Volume Harvested From Period 1 Blocks	Total Softwood* Volume Harvested
1993-94	141,065 m^3	141,065 m^3
1994-95	174,831 m^3	174,831 m^3
1995-96	154,029 m^3	154,029 m^3
1996-97	140,114 m^3	140,225 m^3
1997-98 **	162,997 m^3	162,997 m^3
TOTAL	a) 773,036 m^3	b) 773,147 m^3

Performance Measure = a ÷ b x 100 = 100 %

* Spruce, Fir, Jack Pine
** Proposed in 1997-98 Operating Plan

Regional Comments:

- Performance satisfactory. This licensee performed well in identifying and scheduling for cleanup blowdown softwood resulting from wind storms between 1993-1997.
- The percent of softwood allocation harvested on license 9 over the period 1992-96 was 99.1%.

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BASIC SILVICULTURE
(areas in hectares)

Year	Area Treated to Standard: Planting	Spacing *	Total	Basic Requirement
1992-93	307	401	708	700
1993-94	305	402	707	700
1994-95	303	616	919	700
1995-96	166	941	1107	700
1996-97	110	338	448	700
TOTAL			a)3889	b) 3500

Silviculture Effort = a ÷ b x 100 = 111 %

Regional Comments: Additional silviculture above Basic and Expanded Programs

1992-93 - 0 ha in DWAMU Planting and Spacing

1993-94 - DWAMU Plant = 44 ha; DWAMU Spacing = 46 ha

1994-95 - DWAMU Plant = 4 ha; DWAMU Spacing = 73 ha

1995-96 - DWAMU Plant = 11 ha; DWAMU Spacing = 0 ha

1996-97 - DWAMU Plant = 4 ha; DWAMU Spacing = 98 ha

Total area for both softwood and hardwood spacing (including DWAMU) is 4086 ha.

Total softwood spacing = 2915 ha
Total hardwood spacing = 1171 ha

Note: In comments section, please identify the total area of both softwood and hardwood spacing carried out during the period.

*Figures include Basic Cleaning

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REMEDIAL TREATMENT OF PLANTATIONS
(areas in hectares)

Year of Establishment	Area Requiring Treatment	Treatable* Area	Actual Area Treated To Standard
1983	139	139	139
1984	40	40	40
1985	14	14	14
1986	51	51	51
1987	74**	0	0
1988	64	0	0
1989	0	0	0
1990	25***	0	0
TOTAL		a) 244 ha	b) 244 ha

Performance Measure = b ÷ a x 100 = 100 %

* Area determined suitable for treatment prior to March 31, 1997.

Regional Comments:

** Regional approval given to hold area for treatment. Undersized competition.

*** Area requiring treatment not finalized at Regional level - requires field checking. No treatable area available for 1989 and 1990 plantations.

LICENSE: 9 - Carleton

FISH HABITAT PROTECTION

Year	Number of Watercourse Crossings Installed*	Number of Watercourse Crossings Where Monetary Penalties Were Incurred
1992-93	29***	0
1993-94	22***	1
1994-95**	29	5
1995-96	32	0
1996-97	48	0
TOTAL	a) 160	b) 6

Performance Measure = (1-(b ÷ a)) x 100 = 96.2 %

* Applies to all natural watercourses
** Includes from 1994 to March 31/97 all watercourse crossings installed by Sub-licensees that were under the supervision of the Licensee during the period.

Regional Comments:

*** Does not include crossings installed by sub-licensees.

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WILDLIFE HABITAT MANAGEMENT

1. Component: Harvesting Without Approval

Year	Number of Blocks In Or Directly Adjacent To *Site-Specific Wildlife Habitats	Number of Blocks In Or Directly Adjacent To Site Specific Habitats In Which Penalties Were Applied For Harvesting Without Approval In The Site Specific Habitat
1992-93	14	0
1993-94	19	0
1994-95	27	1
1995-96	30	0
1996-97	34	1
TOTAL	a) 124	b) 2

Performance Measure = (1-(b ÷ a)) x 100 = 98.4 %

Note: * As defined on page 14 of the Licensee Performance Evaluation document (July 1993)

Regional Comments:

Performance satisfactory.

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WILDLIFE HABITAT MANAGEMENT

2. Component: Not Following Approved Harvest Prescription

Year	Number of Blocks In Site-Specific Wildlife Habitats	Number of Blocks In Site-Specific Habitats Which Penalties Were Applied For Not Following Prescription
1992-93	8	0
1993-94	11	0
1994-95	18	2
1995-96	19	1
1996-97	21	0
TOTAL	a) 77	b) 3

Performance Measure = (1-(b ÷ a)) x 100 = 96.1 %

Regional Comments:

Performance satisfactory.

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WILDLIFE HABITAT MANAGEMENT

3. Component: Submission and Implementation of DWAMU Management Plans for Period I

Year	Area of DWAMU Management Identified for Period I (92-97)	Area of DWAMU For Which Management Plans Were Submitted And Implemented In Period I (92-97)
1992-97	12530 ha	12530 ha
TOTAL	a) 12530 ha	b) 12530 ha

Performance Measure = (b ÷ a) x 100 = 100%

Regional Comments:

In 1994 the region re-evaluated the DWAMU land base for License 9. There were changes (additions and deletions) made which impacted the original Management Plan list submitted by the licensee.

The above figure of 12530 ha reflects the actual area of DWAMU land base for Period 1.

STANDARDS FOR ACCEPTANCE OF MANAGEMENT PLANS
LICENSE: Restigouche-Tobique

The forest management planning process is comprised of two phases:
1) the evaluation of management alternatives for the purpose of selecting an appropriate strategy; and,
2) geographic layout of that strategy for the purpose of implementation.

Both phases must be satisfactorily performed for the Licensees' plan to be deemed acceptable.

Phase 1 of the planning effort will be deemed acceptable if all the following steps are performed[1].

1. The Licensee provides the following resource information:	Yes	No
a. Permanent sample plot data	X	O
b. 5th year survey data	X	O
c. Annual reports	X	O
d. Pre-32 survey data	X	O
e. Maps of operationally inaccessible areas	X	O

Comments:

Missing 1994 and 1995 5th year surveys at Regional Office.

2. Stand level forecasts are made using DNRE approved models for the following stand conditions:		
a. Managed	X	O
b. Natural cutovers	X	O
c. Even-aged merchantable (clearcut and 2-pass)	X	O
d. Uneven-aged suitable for selection harvest (hardwood and softwood types)	X	O

[1] For details on the criteria listed here, refer to the document entitled "A vision for New Brunswick Forests: Goals and Objectives for Crown Land Management, 1994"

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e. Pre/post cut transition	X	O

Comments:

Step 2 was completed, but Licensee did not respect the Management Planning Schedule.

3. Stand development is characterized by the following parameters:	Yes	No
a. Volume by species	X	O
b. Mean piece-size	X	O
c. Log content to 15 cm top	X	O
d. Percent softwood by volume	X	O
e. Limits to operability	X	O
f. Time frame of suitability for deer winter cover	X	O
g. Time frame of suitability as mature softwood habitat	X	O

Comments:

Step 3 was completed, but Licensee did not respect the Management Planning Schedule.

4. Each stand on the License is characterized for the following conditions:

(i) Biological:

a. Species composition	X	O
b. Growth rate	X	O
c. Site quality	X	O
d. Harvest transition	X	O
e. Suitability for 2 pass even-aged	X	O

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	Yes	No
f. Suitability for uneven aged cutting cycle	⊗	○
g. Suitability for silviculture (i.e., planting, spacing and commercial thinning)	⊗	○
(ii) Physical:		
a. Operationally inaccessible	⊗	○
b. Riparian buffer	⊗	○
c. Legal Reserve	⊗	○
d. Deer Wintering Area Management Units	⊗	○

Comments:

Step 4 was completed, but Licensee did not respect the Management Planning Schedule.

5. A computer readable file of the classification results determined in Item 4 above is supplied to the Department. ⊗ ○

Comments:

Step 5 was completed, but Licensee did not respect the Management Planning Schedule.

6. DNRE approved forest level models are employed to analyse even and uneven aged management for the stand types determined in Item 4 above. ⊗ ○

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Comments:

Step 6 was completed, but Licensee did not respect the Management Planning Schedule.

7. Forest level analyses are performed which explicitly include the following biologically feasible range of inputs:

	Yes	No
(i) Silviculture		
a. Planting - amount, priority criteria, and species	X	
b. Spacing - amount and priority criteria	X	
c. Commercial thinning - amount and priority criteria	X	
(ii) Harvest		
a. Clear-cut - amount and priority criteria	X	
b. 2-pass partial cut - amount, priority criteria and type	X	
c. Selection (uneven-aged) - amount, priority criteria and type	X	

Comments:

Step 7 was completed, but Licensee did not respect the Management Planning Schedule.

8. Forest level results for each combination of inputs listed in Item 7 above are expressed by period for each of the following indicators:

	Yes	No
(i) Timber		
a. Sustainable fibre supply and volume by source and harvest method	X	

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	Yes	No
b. Log supply for current specifications	X	O
c. Mean tree size profile	X	O
d. Fallout species profile	X	O
e. Silviculture costs	N/A O	O

(ii) Mature Coniferous Forest Habitat	Yes	No
a. Net MCFH Objective identified	X	O
b. Net MCFH Objective met for periods 1 through 7	X	O
c. MCFH Blocks meet composition and spatial criteria	X	O
d. MCFH/DWA overlap factored into block projections (if overlap is significant)	X	O
e. MCFH Block summary sheets provide information as in "Mock Plan" appendix 7	X	O
f. Period 1 timber harvest estimates provided	X	O
g. MCFH Block stand-level class files provided	X	O
h. MCFH Block stand files provided	X	O
i. MCFH Blocks delinated on management plan map	X	O
j. Gross MCFH Objective calculated	X	O
k. Gross MCFH Objective met for periods 8 through 16	X	O
l. MCFH management proposal accepted	X	O

Comments:

Step 8 was completed, but Licensee did not respect the Management Planning Schedule.

(iii) Deer Wintering Areas	Yes	No
a. Group 1 DWA management summarized (i.e. 1993-97 DWA Mgmt Plans).	⊗	○
b. Group 2 DWA management scenarios (1997+) presented	⊗	○
c. Period 1 DWA area identified (i.e. for P1 DWA Mgmt Plan development).	⊗	○
d. Period 1 timber harvest estimates provided.	⊗	○
e. FORMAN files and environments provided.	⊗	○
f. DWA boundaries delineated on management plan maps.	⊗	○
g. DCWH supply and management proposal accepted.	⊗	○

Comments:

Step 8 was completed, but Licensee did not respect the Management Planning Schedule.

(iv) Watercourse Buffer Zones	Yes	No
a. Buffer widths by feature presented.	⊗	○
b. Potential for timber harvest investigated	⊗	○
c. Buffer harvest prescriptions described	⊗	○
d. Period 1 timber harvest estimates provided	⊗	○
e. Buffer management proposal accepted	⊗	○

9. The Licensee's first non-spatial submission of the management plan met minimum standards as defined in the document entitled "A vision for New Brunswick Forests Goals and Objectives for Crown Land Management" (1994) .. .. ○ ⊗

Comments:

Please refer to attached comments and documents.

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1. Lays out and characterizes the harvest schedule for a minimum of 25 years (or until such time as the point of minimum softwood growing stock is reached up to a maximum of 35 years), describing the harvest schedule as follows:

	Yes	No
(i) Harvest Block File:		
a. Region	x	o
b. License	x	o
c. Block #	x	o
d. Map #	x	o
e. Area (ha)	x	o
f. Type of harvest	x	o
g. Deer Wintering Area Management Unit Number	x	o
h. Supply run (SW or HW)	x	o
i. Harvest volume of species group (by period)	x	o
j. List of adjacent block numbers	N/A o	o
(ii) Harvest Stand File:		
a. Map #	x	o
b. Stand #	x	o
c. Block #	x	o
d. Area in block	x	o
e. Harvest volume by species group (by period)	x	o

Comments:

Step 1 was complete, but Licensee did not respect Management Planning Schedule.

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		Yes	No
2.	Identifies spacing and commercial thinning areas for the first 5 years	x	o

Comments:

Licennsee not required to block spacing area, will be identified yearly at the operating plan level.

3. Sequences blocks for harvest based on the following criteria:

a.	A minimum harvest delay of 2 periods between adjacent harvest blocks which comprise a total area exceeding a maximum opening of 100 ha	x	o
b.	The distribution of harvest types by period approved in Phase 1 of the management plan	x	o

Comments:

Large number of blocks in original submission did not meet harvest block opening size criteria – see correspondence to Licensee.

		Item 8 above	
4.	Describes the impact of the mapped strategy for all indicators listed in Phase 1, ...	x	o

Comments:

Step 4 was completed, but Licensee did not respect the Management Planning Schedule.

Execution of the two phases of the management planning process must be performed in sequence and evaluation of both steps will be made upon submission of each phase as they are completed. The management alternatives (Phase 1) will be submitted and an appropriate strategy selected prior to proceeding with geographic layout (Phase 2). If both phases are accepted, the Licensee management planning performance will be acceptable in the context of the Performance Evaluation criteria.

FOREST MANAGEMENT PLANNING PROCESS EVALUATION
RESTIGOUCHE-TOBIQUE LICENSE #10

PHASE 1

Although most standards were met with regards to phase 1 of the management planning process, as indicated in this evaluation document, the Licensee's first non-spatial submission of the management plan did not meet minimum standards as defined in the "A Vision for New Brunswick Goals and Objectives for Crown Land Management" document.

1. The first submission was submitted five (5) weeks late and did not follow the format found in Appendix 3 of the "A Vision ..." document. (see attached documents #1 & 2)

2. Approval was given to Licensee to proceed with the spatial plan on July 8, 1996, but a number of issues still needed to be addressed with regards to the non-spatial plan. (see attached document #3)

3. It was not until July 7, 1997, after three (3) submissions that the non-spatial plan was finally completed.

PHASE 2

Although most standards were met with regards to phase 2 of the management planning process, as indicated in this evaluation document, the Licensee's first spatial submission of the management plan did not meet minimum standards as defined in the "A Vision ..." document.

1. The first submission was submitted four (4) weeks late and only contained periods 1 and 2 blocks for only 2/3 of the license. Region responded on August 14, 1996. (see attached document #4)

   Clearcutting was scheduled in tolerant hardwood stands that had potential for sawlog production.

   A large number of blocks in all submissions of the spatial plan did not meet harvest block opening size criteria.

2. Licensee proceeded with at least three (3) other submissions, for which Region responded to. Regional findings were summarized in Tom Ng's memo of March 1997. (see attached document #5)

3. The final version of the Management plan was submitted on June 27, 1997 and approved on July 07, 1997, six (6) months behind schedule.

The execution of the two phases of the management planning process was performed in sequence. Both phases were approved simultaneously.

In view of the above and considering that Fraser Papers Inc. implemented few of our suggestions and recommendations during the review process, License #10 Management Planning Performance is deemed unacceptable.

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HARVEST SCHEDULE
(volumes un m^3)

Year	Allocation	Softwood*Volume Harvested From Period 1 Blocks	Total Softwood* Volume Harvested	% Allocation
1993-94	502 290	610 898	610 898	122%
1994-95	507 465	580 482	580 482	114%
1995-96	507 465	621 431	621 431	122%
1996-97	507 465	403 613	403 613	80%
1997-98**	514 801	514 801	514 801	100%

TOTAL a) b)

Performance Measure = a ÷ b x 100 = 100%

* Spruce, Fir, Jack Pine
** Proposed in 1997-98 Operating Plan

Regional Comments:

Above Softwood volumes refer to the Regular Forest only for 1993 - 1998.

1992-96 Total Softwood Allocation 3 063 425 m^3

1992-96 Total Softwood Harvest 3 179 729 m^3

% Total Softwood Allocation Harvested (1992-1996) 104%

See following page for additional comments.

RESTIGOUCHE-TOBIQUE LICENSE #10

HARVEST SCHEDULE

Regional comments

1. Severe wind storms during past period caused period >1 blocks to be moved ahead to salvage the blowdown. Licensee did a good job in salvaging blowdown.

2. Numerous amendments were made to the operating plans. This issue is often brought up at annual review meetings, but never corrected.

3. Licensee did improve in providing ground information when requested by Regional staff.

4. The licensee had difficulties accepting their role as supervisors of harvest operations. Most infractions were reported by DNRE staff while doing final inspections.

5. Some penalties, both minors and majors, were issued during period and Licensee conformed to Regional recommendations.

6. Licensee's volume tracking system was less than acceptable. The Regular Forest allocation was exceeded by 122%, 114%, and 122% in 1993, 1994, and 1995 respectively exceeding the 110%/year allowed.

In summary, Licensee performance with respect to harvest operations was acceptable, with some improvement required in the following areas: harvest monitoring, volume tracking, and better planning at the operating plan level to cut down on the number of amendments.

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BASIC SILVICULTURE

(Areas in hectares)

Area Treated to Standard				
Year	Planting	Spacing	Total	Basic Requirement
1992-93	1105	1356	2461	2270
1993-94	873	926	1799	1800
1994-95	583	1036	1619	1800
1995-96	288	1496	1784	1800
1996-97	238	1282	1520	1800
TOTAL			a) 9183	b) 9470
Silviculture Effort = a ÷ b x 100 = 97%				

Regional Comments:

- The planting level decreased while the thinning level increased.
- In 1995, 1,179.3 ha. of thinning was treated under the Expanded Program (1,123 ha. was hardwood thinning).
- In 1996, 1,413.5 ha. of thinning was treated under the Expanded Program (1324 ha. was hardwood thinning).
- Hectares planted in DWA's: 21 ha.
- Hectares thinned in DWA's: 73 ha.
- The above 9183 ha. includes 722 ha. completed by the Region under job creation projects.
- Total area softwood treated silviculturally on License: 9277 ha.

Note: In comments section, please identify the total of both softwood and hardwood spacing carried out during the period.

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REMEDIAL TREATMENT OF PLANTATIONS

(Areas in hectares)

Year Of Establishment	Area requiring Treatment	Treatable Area	Actual Area Treated to Standard
1983	724	724	24
1984	1266	925	175
1985	829	604	126
1986	1177	668	0
1987	505	505	0
1988	573	22	0
1989	972	31	0
1990	896	0	0
TOTAL		a) 3479	b) 325
Performance Measure = b ÷ a x 100 =			9%

* Area determined suitable for treatment prior to March 31, 1997.

Regional Comments:

Note: In 1997 Fraser completed some 700 ha's of remedial silviculture in 83, 84 and 85 plantations. This does not appear in this report.

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FISH HABITAT PROTECTION

Year	Number of Watercourse Crossings Installed*	Number of Watercourse Crossings Where Monetary Penalties Were Incurred
1992-93	0	0
1993-94	0	0
1994-95**	46	1
1995-96	33	1
1996-97	45	0
TOTAL	a) 124	b) 2

Performance Measure = (1-(b ÷ a)) x 100 = 98 %

* Applies to all natural watercourses

** Includes from 1994 to March 31/97 all watercourse crossings installed by Sub-licensees that were under the supervision of the Licensee during the period.

Regional Comments:

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WILDLIFE HABITAT MANAGEMENT

1. Component: Harvesting Without Approval

Year	Number of Blocks In Or Directly Adjacent To *Site-Specific Wildlife Habitats		Number of Blocks In Or Directly Adjacent To Site Specific Habititats In Which Penalties Were Applied For Harvesting Without Approval In The Site Specific Habitat	
	MCFH/DWA	- Buffer	MCFH/DWA	- Buffer
1992-93	0	0	0	0
1993-94	4	36	0	0
1994-95	72	128	0	6
1995-96	81	98	1	1
1996-97	130	136	0	2
TOTAL	a) 685		b) 10	

Performance Measure = (1-(b ÷ a)) x 100 = 99 %

Note: * As defined on page 14 of the Licensee Performance Evaluation document (July 1993)

Regional Comments:

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WILDLIFE HABITAT MANAGEMENT

2. Component: Not Following Approved Harvest Prescription

Year	Number of Blocks In Site-Specific Wildlife Habitats		Number of Blocks In Site-Specific Habitats Which Penalties Were Applied For Not Following Prescription	
	DWA/MCFH	Buffer	DWA/MCFH	Buffer
1992-93	0	0	0	0
1993-94	0	0	0	0
1994-95	29	0	3	0
1995-96	44	2	2	0
1996-97	84	0	1	0
TOTAL	a) 159		b) 6	

Performance Measure = (1-(b ÷ a)) x 100 = 96 %

Regional Comments:

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WILDLIFE HABITAT MANAGEMENT

3. Component: **Submission and Implementation of DWAMU Management Plans for Period I**

Year		Area of DWAMU Management Identified for Period I (92-97)		Area of DWAMU For Which Management Plans Were Submitted And Implemented In Period I (92-97)
1992-97		9029 ha		2039 ha
TOTAL	a)	9029 ha	b)	2039 ha

Performance Measure = (b ÷ a) x 100 = 23 %

Regional Comments: